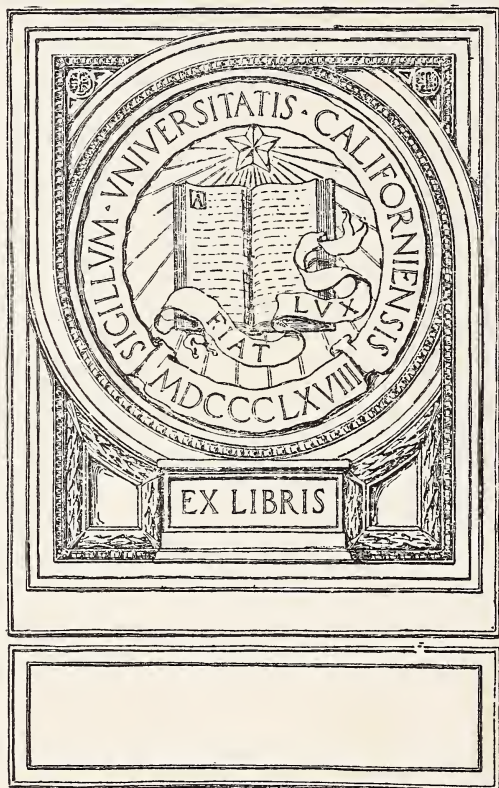


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The Journal
of the
Iowa State Medical
Society

July 15, 1911

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THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

D. S. FAIRCHILD, M. D. Clinton
EDITOR

C. A. BOICE, M. D. Washington
ASSOCIATE EDITOR

Vol. 1.

Clinton, July 15, 1911.

No. 1.

Address of the President*

M. N. VOLDENG, M. D., Cherokee, Iowa.

Members of the Iowa State Medical Society,

Ladies and Gentlemen:—

“We live in the past, by knowledge of its history; and in the future, by hope and anticipation.”

I am very happy in being afforded an opportunity to again express to you my grateful and sincere appreciation of the high honor you have done me in selecting me as your presiding officer for the past year.

I can not say that I have measured up to the high standard set by my predecessors, or merited your confidence; I hope, however, you will believe me when I say, I have done my best to carry out the duties prescribed by our constitution.

The duties of the office have been a real pleasure, and the co-operation of fellow-officers and members has at all times been most cordial and helpful.

OUR SOCIETY.

Prior to the recent re-organization, the total membership was 600. Of this number, only 400 are said to have been in good standing. Today the total membership is approximately 2,000, all of whom are in good standing. It is estimated that there are in the state 3,500 physicians who are eligible to membership. We have then, a percentage of nearly 1500 physicians in the state, who for some reason or another, have not yet affiliated with one of our component societies. I am not prepared to even venture an opinion as to the cause which has contributed to the existing conditions. I think we will all agree that the number is larger than it ought to be, and, that with an eligible list of 3,500, we can and should have a membership of 3,000. Inasmuch as the component society, under

*Read before the Sixtieth Annual Session of the Iowa State Medical Society, Des Moines, May 17-19, 1911.

our present system is the only avenue through which membership in the State Society can be had, the road should be made as easy as possible for the traveler. The welfare of the Society depends upon the welfare of each component society; hence, every effort should be made to increase the efficiency of the county society. Under the present arrangement, the councilors are charged with the responsibility of looking after the welfare of the county societies in their district. It must be apparent to all, that the men chosen for these places are among the busiest members of our Society; and it is too much to expect that they will devote any considerable time to the duties which our constitution places upon them. I do not wish to be understood as recommending a change in the present arrangement. I am convinced, however, that we should have a more systematic supervision of our component societies, than is possible, or even probable, under the present arrangement.

After giving the subject much careful consideration, it has occurred to me, that our Society is now large enough and of sufficient importance to warrant the employment of an officer who should devote all of his time to the State and Component Societies. The officer now designated as "Secretary" might be entrusted with such additional duties. If the Society is to adopt the policy of owning and publishing its own Journal, some one will be needed for this work. If the right man can be found, and the Society is willing to pay such a man a reasonable salary, plenty of work may be found to keep such person busy.

My thought has been then, that the Society might with advantage, employ some competent person at a good salary to edit the Society Journal, perform the duties of Secretary, and in a general way look after the interest of the State and County Societies. I am aware that the present income of the Society is not sufficient to carry out this program and the adoption of this policy would necessitate a slight increase in the annual dues. However, I can not help but believe that the change would prove beneficial.

As a member of the Committee on Scientific Work, it has seemed to me that the section on Internal Medicine is too large, or the number of papers allotted, too small, including as it now does, the entire field of mental and nervous diseases as well as diseases of children. In my judgement, no branch in medicine is of greater importance today than diseases of children. I am satisfied too that under the present arrangement, the subject of "Mental and Nervous Diseases" is receiving less attention than the importance of the subject justifies. I recommend that the number of papers allotted for this section should be either materially increased, or the two branches given separate recognition.

OUR PROFESSION.

The medical profession is essentially a quietly working body; most of it's work is done amid the sad surroundings of the sick room, and in the private and secluded consulting chamber. The public knows but little of the many hours of trial and anxiety through which the physician passes. He goes about his daily work with apparent cheer and content.

While I do not mean to intimate that the average family physician is not appreciated by his patients and the public, it has seemed to me that he is not always given credit for what he really is and what his labors mean to the welfare of the community in which he lives and toils.

I believe the members of the medical profession are not receiving the public recognition they deserve as a profession, or as individuals. This is probably due to the fact that we take little or no active part in matters of general interest to the public. "We need the positive virtues of resolution, of courage, of indomitable will, of power to do without shirking the rough work that must always be done, and to persevere through the long days of slow progress or of seeming failure which always come before any final triumph, no matter how brilliant."

The profession has for several years made an effort to secure the establishment of a National Department of Public Health. The head of such department to be a cabinet officer. I am led to believe that the day is far distant when we may hope to realize our desire and ambition for such a department.

What is the reason for the existing condition? Personally, I am convinced that the future has nothing better in store for us unless we put our shoulders to the wheel, work in harmony, and send our members to the legislature. During the last five General Assemblies, I find that the legal profession has been represented in the legislature by 176 members; while the doctors have been represented during the same period by 33 physicians. During the last Congress, the legal profession had a representation of 227; the medical profession was represented by three of its number.

Attention is also called to the fact that the Iowa Medical Society has a membership of 2,000, while the membership of the Iowa Bar Association is only 500.

I believe the average doctor both by training and experience possesses qualifications for legislative duties equal to that of the lawyer or other citizen. While I am not advocating a mixed career of professional politics and medicine for the physician, I do advocate a more live interest in politics and public questions, and a larger representation of physicians in our legislative bodies both State and National. We have important duties to perform effecting the

welfare of the public and our profession, which can not be accomplished in the sick room. If we are to make our influence felt in matters pertaining to the state, we must cease our petty bickerings and often senseless jealousy within our own ranks.

“The relations between us now are those of cordial friendship, and it is to the interest of all alike that this friendship should ever remain unbroken. Nor is there the least chance of its being broken, provided only that all of us alike act with full recognition of the vital need that each should realize that his own interests can best be served by serving the interests of others.”

I earnestly advocate a provision for disabled members of our profession, as contemplated in the recommendation of the report of the committee on “Relief Fund and Tuberculosis Sanatorium for Physicians,” made to the American Medical Association last year, and published in the June number of the Journal.

The matter is referred to the House of Delegates or Society for such action as may seem best at this time.

The campaign against tuberculosis, under the direction of the Board of Control of State Institutions, has been carried on with the enthusiasm and vigor possible with the small fund at its disposal. A layman has continued in the field as public lecturer almost continuously, and a physician has been kept in the field a part of the time. During the past year, Dr. Kime, instead of devoting his time to lecturing before the different county societies, has devoted most of his time to a better organization of these societies, in so far as such organization has had to do with the fight against tuberculosis. More money is needed for this work than has heretofore been available.

In the final analysis, our success in the campaign against tuberculosis resolves itself into our ability to make every tuberculous subject who has become contagious, non-contagious. In spite of the statement made several months ago on the floor of the House of Representatives that the “state doctors are causing more tuberculosis than they are preventing,” the death-rate from tuberculosis has declined more than ten per cent during the decade. Notwithstanding adverse criticism from well meaning, but badly informed sources, the profession is able to make a very satisfactory showing along lines of real progress. As a result of this progress, the national death-rate has been materially reduced in the last ten years. The greatest advance has been made in the departments of Cause and Prevention. Powerful national organizations are being formed in the interest of an organized campaign against tuberculosis, infant morality, for better and more rational school hygiene, for more wholesome and less hazardous factory and work-shop con-

dition. Communities have been awakened to the significant fact, that in its own hand lies its fate.

Among the really great discoveries during the past year, the arsenical compound known as "606" should be given first place, although still in the experimental stage.

"In all of this we have legitimate cause to feel a noble pride, and a still nobler pride in the showing made of what we have done in such matters as our system of wide-spread popular education and in the field of philanthropy, especially in that best kind of philanthropy which teaches each man to lift both himself and his neighbor by joining with that neighbor hand in hand in a common effort for the common good."

In connection with our Board of Health, the important question of the hour, is how best to safe-guard the public health and prevent, or at least diminish, the large number of deaths occurring each year from preventable causes.

As citizens we are all proud of our state; rich in natural resources, populated by a vigorous class of people, in point of intelligence and education second to that of no other state, it is difficult to understand why this state appropriates and expends a sum far below that of most of the other states, for public health purposes. Of the states referred to, Pennsylvania heads the list with an appropriation of \$1,500,000, while Iowa is at the foot of the list with an annual appropriation of \$5,000. Wisconsin, next to the lowest in the list comprising 32 states, appropriates a sum nearly twice that of Iowa. In other words, Iowa appropriates the munificent sum of about one cent annually for every five persons to be protected. This question is pertinent: Are the people of Iowa entitled to, or in need of less protection than the people of other states?

Surely, the claim can not be made that Iowa can not afford to as liberal in her treatment of our public health service as any of our commonwealths.

"A healthy state can only exist when the men and women who make it up, lead clean, vigorous, healthy lives; when the children are so trained that they shall endeavor not to shirk difficulties, but to overcome them; not to seek ease, but to know how to wrest triumph from toil and risk."

STATE HOSPITALS.

After having devoted the better part of twenty-five years to a special branch of work, I may be pardoned if I say something concerning our State Hospitals. I venture the opinion that the majority within my hearing have never visited one of our state hospitals. I doubt if half a dozen in this audience know the official name,

their number and location. This condition is unfortunate, if not deplorable; what is true of physicians is also true with reference to the public. Not long ago an educator in the state manifested much interest in the establishment of a psychopathic hospital and consulted the Board of Control in reference to the establishment of such a hospital. He did not know that at each of the four state hospitals such an institution was already in existence. I apprehend that the reason for such a condition is due to a lack of co-operation between the medical profession in the state and the hospitals. Personally, I have felt that the superintendents and members of the medical staff have neglected an important duty in that they have not taken as active a part as they should in matters pertaining to the profession outside of their chosen work. There has been a tendency toward seclusion and a too one-sided specialization among the state hospital superintendents and physicians. Members of the profession outside the hospitals are taking little or no interest in the affairs of the hospital and mutual helpfulness, so essential to the best work and progress, is lacking. If the general practitioner would visit our institutions, become familiar with our difficulties, our problems, our efforts and what we are accomplishing, the advantage would be two-fold, both the hospital and the general practitioner would be the beneficiaries. William Francis Drewry says "There needs to be a wider interest awakened everywhere in the problems of psychiatry and in our institutions. One of the most fruitful ways of doing this is by bringing about a closer relationship and more active co-operation between the hospitals, the professional public, the medical schools and medical societies." I have advocated in a quiet way for a number of years, the desirability of more co-operation. I would like to see a staff of consulting physicians in connection with each of the four state hospitals.

Again—William Francis Drewry says: "There is no need whatever of the existence in the public mind of the insoluble mysticism regarding insanity and the supposed "horrors" of the "asylum," a view once so prevalent. The public and the medical profession may and should come and see that nothing is concealed from the interested and intelligent visitor, but those who come from curiosity alone, or to be amused by the misfortunes of the patients, are not wanted. It is high time that the people everywhere were correcting old false conceptions of insanity and the "asylum" and getting in closer touch with our institutions, thereby giving encouragement to those who manage them." Ignorance is the greatest foe of our public institutions, and real progress is made possible only to the extent of our ability to enlighten and educate the general public. So far as our hospitals are concerned, this can best be done by the active and cordial co-operation of the medical profession throughout the state.

I have said that the average physician has little idea of the work that is being done by these institutions. While I do not wish to be understood as claiming that there is no room for improvement, I do want to be understood as claiming that advanced work in psychiatry is being done in our state hospitals; not only so, but that medical work in general will compare favorably with that done in any of our general hospitals. However, we do need consulting physicians in several departments, more especially in the department of surgery, gynecology, eye, ear, nose and throat.

As an illustration of the ignorance so prevalent with respect to our work, this question is not infrequently asked, even by physicians—"Do any of these people ever recover?" During the month of March we admitted 12 patients to the Cherokee State Hospital; during the same period we discharged eight as fully recovered. While the record for the month of March was below the average in the number of admissions, and above the average in the number of recoveries, it should serve as an illustration of the work done and the result obtained.

One word in reference to the County Board of Insanity Commissioners:

While it is customary for the physician on the Board to make the examination of the patient brought before the Commission, I do not believe that the law contemplates; and I do not believe it is good practice. I believe the law to mean that the Commissioners should select an outside physician to make the examination and report his findings to the Board. By adopting this practice, it will be seen that the patient receives the benefit of the opinion of two physicians instead of one; this is desirable in many cases.

THE COUNTY HOSPITAL.

It is to be regretted that during the two years the most excellent law, made possible by a member of this society, has been in operation, so little progress has been made toward the erection and maintenance of such county hospital. The only two counties that have thus far been successful are Washington and Jefferson. The proposition was submitted, but defeated in the counties of Montgomery, Decatur, Story, Buena Vista, Clay and Lee. Section 16 of the law, embodies a provision which in my judgement alone justifies the building and maintenance of a county hospital. This section reads as follows: "The Board of Trustees shall at all times provide a suitable room for the detention and examination of all persons who are brought before the Commissioners of Insanity of such county." I doubt if the author of the bill comprehended the importance of this Section. The present plan of sending the sheriff or other officer after the patient and bringing him to the hotel, court house, or jail for ex-

amination, is as detrimental to his best interest as any one thing that happens during the illness of the patient. Berkley says:

"The first requisite in the treatment of any case of ordinary insanity is a good nurse; the second, a good cook; and the third, good air with pleasant surroundings. Without the first, we can not hope to control or to have a regular course of treatment carried into effect. Without the second, all our efforts to increase the bodily nutrition will be in vain; while the last adds greatly to the patient's chances of complete recovery."

MEDICAL EDUCATION AND MEDICAL LICENSE.

The appointment of the very best available men on the Board of Medical Examiners, is of very great importance. This suggestion is not intended as a criticism of the men now or formerly members of our Board, but is submitted as a general proposition worthy of our best thought and actions. The state and country may be congratulated upon the fact that the standards of preliminary and medical education are rapidly being advanced.

Our present system for the examination of candidates is both unjust and superficial, in that it does not include practical laboratory and clinical tests. It has been claimed that the written examinations as given in the majority of states, can be passed by any intelligent person who may have spent a few brief months in the study of "Quiz Compend's" or in some of the shrewdly conducted quiz classes.

The present written examination is not an actual test of a man's fitness to practice medicine and such an examination could be passed by a man who may never have made an experiment in a laboratory or who may never have looked through a microscope, or who may never have examined a patient. Again, the examinations for license to practice medicine in this country are much easier than those required in other countries. This fact tends to increase the number of foreigners who flock to this country including a considerable number who probably could not secure a license at home.

"There should be but a single portal to the practice of medicine—Individuals who are to treat human ailments are alike in two respects; in the first place, they must make diagnosis in order to recognize what they are endeavoring to treat; and secondly, what they may fail to do in certain cases, even as much possibly as the things they do, may mean the life or death of the patient. For these reasons, every one who is to treat human ailments, regardless of the particular methods, should be required to have a thorough training in all branches of the medical course. The objections to medical sects, therefore, are not so much because they are sects as it is that they enter the medical profession with a smaller amount of preliminary training than do regular physicians."

The important thing to be borne in mind in the consideration of medical education and medical licensure is the establishment of a uniform standard; that is to say, the same standard which is to be applied to members of the medical profession should apply in like degree and manner to all others who threat, attempt, or profess to treat human ailments. The medical profession of Iowa should be in the front ranks of the movement now going on for the standardizing of medical education in this country.

Every candidate for license to practice medicine should, in addition to the written examination at present in vogue in most of our states, be required to pass an examination in practical work in the laboratories and wards of some hospital. I am not so sure that the written examinations could not be altogether dispensed with, if in their place we could have a comprehensive test of the candidate's qualifications to practice medicine exemplified in the laboratory and in the actual examination of a select number of patients under the supervision of well qualified men. One trouble with the ordinary written examination is an apparent effort on the part of the examiner to be technical rather than practical, catchy, rather than just. For that reason I believe it is probable, and even possible, that under our present system a thoroughly qualified physician would have difficulty in passing some of our state examinations, while one who had made good use of the various quiz compends, and in addition had had the assistance of a specialist in the art of quizzing, would pass with high marks, and yet utterly lack the necessary education and training for the successful and honorable practice of medicine.

The Carnegie Foundation Report on the status of American Medical Schools, taken as a whole, must be regarded as epoch making in its scope, fearless and specific in its recommendations, and will do much toward placing medical education on a higher and more stable basis. Medical education, and the same is true of all branches of learning, depends to a large extent upon the personal equation. That is to say, a person intent on securing a medical education will succeed and the question of the institution becomes largely a secondary consideration. The truth of this statement is verified by the living example of many of our foremost physicians and surgeons. The report has been criticized by some for not giving due credit to earnest efforts made by our medical schools during the last ten years in raising the standard and increasing the efficiency of the work done. This charge of apparent unfairness will no doubt retard the progress of reform aimed at by the report.

THE COMMISSION EVIL.

From inquiries within and out of the state, it is quite evident that the practice referred to as the "Commission Evil" is on the in-

crease. Discussions in reference to it are no longer confined to members of the medical profession, but the subject is now being discussed by the press and the laity. From information I have been able to gather, I conclude that an alleged unfair and unjust difference in the fees received by the specialist and the general practitioner is to a large extent responsible for the so called "Commission Evil." While the practice which it is alleged is persued by the profession today, is to say the least, deplorable, I am charitable enough to believe that the originators had in mind the cultivation or encouragement of co-operation rather than competition. If so, I think we must all admit the effort has been a failure. Co-operation, however, should be encouraged rather than competition. If, as is claimed by many, the division of the fee has come to stay, the practice should be made uniform, divested of all secrecy with reference to both patient and physician, and the entire transaction made honorable, respectable and above all, just to all concerned.

I am aware that the regulation of the conduct of the individual members of this Society lies with their respective component societies and not with our state or national organization. Nevertheless, I recommend that the House of Delegates appoint a committee whose duty it shall be to fully and fairly investigate the entire subject of fee division as now claimed to be practiced by certain members of our society, and their findings with recommendations reported to the next annual meeting of the House.

Deny is as we may, the evidence must be apparent to all, that public confidence in the medical profession today, is at a low ebb. A general feeling of doubt and suspicion respecting our motives is showing itself in various ways. We are accused of being a "Medical Trust" with no better or loftier ideals than that of pecuniary gain.

If, what has been here suggested, is worthy of consideration, let me suggest further that an otherwise innocent functional disorder, if persisted in, will eventually lead to structural changes, unless early and vigorous treatment is instituted.

LEGISLATION.

The last General Assembly should be given credit for defeating some very bad measures and for enacting some good ones in the interest of medical science. The bill by Representative Perkins of Delaware County, to prevent the pro-creation of habitual criminals, imbeciles and the feeble minded, deserves special mention.

The law is far reaching and sweeping in its provision and will require the utmost care and deliberation in its execution if it is to remain a part of our statutes.

An appeal has been made to every legislature for the last twenty-five years or more, for separate provision for our epileptics, and each time the recommendations have been turned down for lack

of funds. The same has been true in more recent years respecting urgent recommendations for the segregation of our tubercular insane. Although all four of the state hospitals asked for new buildings in which to house tubercular patients, the last General Assembly made provisions for such buildings at only one of them. The same fate has met many other requests for betterment of our state institutions. It is seldom that a legislator is not ready to admit that requests for appropriations are just and needed; their only excuse is a lack of available funds. This condition will continue until some means are devised for increasing the present state levy. The number of state institutions is increasing from time to time and the population of many of them is steadily growing, while the increase in the available funds for special appropriations has been slight.

It is to be regretted that the recent bill by Representative Ripley of Hancock County, creating a Commission to investigate the causes of insanity, epilepsy, mental deficiency, delinquency and criminality, their findings to be reported to the next General Assembly, including measures for the prevention of such diseases, defects and moral failures, failed to pass the Senate after having received quite uniform support in the House.

Such a measure is timely and calculated to be of far reaching benefits if entrusted to a wisely selected and competent commission.

The Society should go on record strongly favoring such a Commission. The "Right and Wrong" knowledge test of insanity continues on the statute books of many of our states in spite of the fact that alienists and physicians generally, have continued their opposition against the practice. While as alienists, we can not accept this "right and wrong" test with respect to responsibility for crime, so long as it remains the law, our attitude must conform to its provisions as nearly as is possible, bearing in mind that as experts we are concerned not with the law, but rather with the science. We all agree that the present method of summoning experts is radically wrong. Instead of permitting, as is now the practice, counsel for the plaintiff and defendant to summon their own experts, these should be summoned by the court and neither counsel in the case should be permitted to call other than ordinary witnesses. With this plan, much of the odium now attached to expert testimony would be removed.

And now, ladies and gentlemen, may we ever be mindful of the duties which a wise Providence seems to have designed for us, guarded in our conduct, clean in heart and noble in purpose. With hands void of offense, let us always be ready to stand up when duty calls us and with a voice true to our convictions, say: this shall prevail because it is right; and that shall not be done, at least, not without our protest.

Address on Surgery.

A NEW PRINCIPLE UNDERLYING THE INTERPRETATION OF CLINICAL PHENOMENA OF THE ABDOMINAL VISCERA WITH SPECIAL REFERENCE TO EMOTIONAL AND PAINFUL INDIGESTION.

GEORGE W. CRILE, M. D., Cleveland, Ohio.

It is my first and very pleasant duty to express my appreciation of the honor of an invitation to deliver the address in Surgery before the Medical Association of Iowa. While appreciative of the honor, I am also grateful for the opportunity of renewing valued friendships.

In development of all of the sciences there has been usually seen three principal phases—viz: The first, a period of pure empiricism and baseless theories; the second, a period in which vast numbers of facts are isolated; third, the harmonizing of these facts by a general hypothesis. The first period is the period of ignorance and superstition, leading nowhere; the second period, because of the mass of uncorrelated facts, leads to confusion; while the third period is a period of simplification by great generalization. It is chiefly in this period that facts and phenomena become predictable and science becomes truly useful.

In recent years it has seemed at times that the mass of isolated facts would swamp the strongest intellect and that an endless number of specialists in the science as well as in the practice of medicine would be required. For myself, I hold the opinion, that medicine has passed entirely through the first stage, is passing out of the second stage and is now entering upon its third and final stage. We have left superstition behind, we are probably passing the zenith of accumulation of uncorrelated facts, and important generalizations are now appearing. The volumes written on yellow fever and malaria are now comprehended in the one word, mosquito; the monographs on diphtheria are now comprehended in the words bacillus and antitoxin. And thus, small pox-vaccination; typhoid-preventive vaccination; meningitis-antitoxin; hemorrhage-transfusion of blood; surgical shock; anoci-association-transfusion—and so each year a generalization simplifies some disease.

In the selection of my topic for this occasion I have had in mind the probable dawn of a generalization in the phenomena of the digestive tract: It is such a commonplace observation that we do not appreciate the importance of the fact that the principal lesions of the abdomen present the same phenomena in man and the lower

*Address on Surgery, Sixtieth Annual Session, Iowa State Medical Society, May, 1911.

animals: perforation of the intestines, obstruction, peritonitis, all exhibit similar phenomena. Then, too, fear and worry cause a similar loss of appetite, with its consequent loss of weight whether in man or in animals. It cannot be a mere coincidence that these phenomena are alike throughout nature. There must be some great law upon which all these phenomena rest equally.

The purpose of this paper is to endeavor to explain the influence the emotions exert upon the digestive tract and the explanation of the origin of painful indigestion.

I will first take up the emotions, and on this occasion I shall limit my discussion mainly to the strongest emotion, viz., **fear**. I believe that it can be shown that the emotion of fear can be elicited only in animals that utilize a motor mechanism in defense against danger or escape from it. The defense of the skunk is a diabolic odor which repels its gross enemies. The skunk has no adequate equipment for defense or escape by muscular exertion. The skunk has little or no fear. Other animals because of their prowess have but few fears. The lion, the grizzly bear and the elephant, are examples. Animals having armoured protection, as the turtle, have little fear. It is obvious that fear is not universal. The emotion of fear is felt only in those animals whose self preservation is dependent upon an uncertain adequacy of their power of muscular exertion either in defense or in flight.

What are the principal phenomena of fear? They are, palpitation of the heart, acceleration of the rate and alteration of the rythm of the respiration, cold sweat, rise in body temperature, tremor, pallor, erection of the hair, suspension of the principal functions of digestion, muscular relaxation, staring in the eyes. The function of the brain is wholly suspended except that which relates to the self protective response to the object feared. Neither the brain nor any other organ of the body can respond to any other lesser stimulus during the dominance of fear.

From the foregoing it would appear that under the influence of fear, most—perhaps all of the organs of the body, are divided sharply into two classes: first, those that are stimulated, and second, those that are inhibited. Those that are stimulated are the entire muscular system, vaso-motor and loco-motor systems, the senses of perception, the respiration, the mechanism for erecting the hair, the sweat glands, the thyroid gland, the adrenal gland, (Cannon), and the special senses. On the other hand the entire digestive tract is inhibited. What is the significance of this grouping? So far as we know, the organs stimulated increases the efficiency of the animal for fight or for flight. It is through skeletal muscles that the physical attack is delivered—these muscles alone energize the claws, the teeth and the hoofs. The increased action of the heart and the blood

vessels increase the efficiency of the circulation; the secretion of the adrenal gland causes a rise in the blood pressure; the increased action of the thyroid gland causes, probably, an increased metabolic activity; there is evidence that glycogen is actively called out, it being the most immediately available substance for the production of energy; the increased activity of the respiration is needed to supply the greater requirements of oxygen and the elimination of the increased amount of waste products; even the dilation of the nostrills so as to give a freer intake of air is seen; the increased activity of the sweat glands is probably needed to regulate the increased temperature of the body from the abnormally rapid metabolism. The activity of all the organs of perception—sight, hearing, smell, are heightened for the purpose of perceiving the more accurately the danger. It could not be a mere coincidence that the organs and the tissues that are stimulated in the emotion of fear are precisely those that are actually utilized in any physical struggle for self preservation. Among the organs inhibited are those that have mainly to do with digestion and procreation.

Are there any other organs stimulated by fear except those that can or that do exist in making a defensive struggle? I know of none. On the other hand, if an animal could dispense with his bulky digestive organs, whose functions are suspended by fear,—if he could, so to speak, clear his decks for battle, it would be an advantage. Although the marvelous versality of natural selection apparently could devise no means of affording this advantage, it did the next best thing—it turned off the nervous current and saved the vital force these noncombats ordinarily consume in the performance of their functions. Whatever the origin of fear is, its phenomena are due to a stimulation of all of the organs and tissues that add to the efficiency of the physical struggle for self-preservation through the motor mechanism and an inhibition of the function of the leading organs that do not participate—the noncombatants, so speak. Fear arose from injury, and is one of the oldest and surely the strongest emotion. By the slow process of the vast empiricism nature evolved the wonderful defensive motor mechanism of many animals and of man. Now the stimulation of this mechanism leading to a physical struggle is action; and the stimulation of this mechanism without action is emotion.

We may say that fear is a **phylogenetic fight or flight**. On this hypothesis we recognize no reverberation through the body as suggested by James, but all the organs and parts of the entire animal are integrated, connected up or correlated, for self-preservation by activity of its motor mechanism. We fear not in our hearts alone, not in our brain alone, not in our viscera alone; fear influences every organ and tissue—each organ or tissue is stimulated

or inhibited according to its use or hindrance in the physical struggle for existence. In thus playing all or most of the nerve force on the nerve muscular mechanism for defense alone, a greater physical power is developed. Hence it is that animals under the stimulus of fear are able to perform preternatural feats of strength. Then, too, for the same reason the exhaustion following fear will be the greater, as the powerful stimulus of fear drains the nervous energy, though no visible action may result. An animal under the stimulus of fear may be likened to an automobile with the clutch thrown out but whose engine is racing at top speed. The gasoline is being used up, the machinery is being worn out, but the machine as a whole does not move, through the power of its engine may cause it to tremble.

Applying this conception to human beings today, certain mysterious phenomena are at once cleared up. It must be borne in mind that man has not been presented with any new organs to meet the requirements of his present state of civilization—indeed not only does he possess the same type of organs as his savage fellows in the wilds, but also the same type of organs possessed by even the lower warm blooded animals. The present status of civilized man is now operated with the primary equipment of brutish organs. Perhaps the most striking difference is the greater control man has gained over his primitive instinctive reactions. Contrasted with the entire duration of organic evolution, man has come down from his aboreal abode and resumed his new role of increased domination over the physical world but a moment ago. And now though sitting at his desk in command of a complicated machinery of civilization, when he fears a business catastrophe it is in terms of his ancestral physical battle in his struggle for existence. He cannot fear intellectually, dispassionately. He fears with all his organs, and the same organs are stimulated and the same organs are inhibited as if instead of its being a battle of credit, of majority votes, it were a physical battle with teeth and claws. Whether the cause of fear is moral, financial, social, or stage fright, the heart beats wildly, the respirations are accelerated, perspiration is increased, there is pallor, trembling, indigestion, dry mouth, etc. The phenomena are those of physical exertion in self defense. There is not one group of phenomena for the acute fear of the president of a bank in a financial crash; another for the trusted official who suddenly and unexpectedly faces the naked probability of the penitentiary; or of a patient who unexpectedly finds he has a cancer, or of the hunter when he shoots his first big game, or of the baseless fears, as falling from a height. Nature has no other means of response, and whatever the cause, the phenomena are always the same—always physical.

The stimulus of fear is repeated from day to day, whether it be a mother anxious on account of the illness of a child; a business man struggling against failure; a politician under contest for place; a broker in the daily hazard of his fortune; litigants in legal battle; the jealous lover who fears a rival; and so the countless real as well as baseless fears in daily life—all forms of fear as it seems to me, express themselves in similar terms of ancestral physical contest and on this law dominate the various organs and parts of the body. Anger and fear express opposite states. Fear expresses the evidence of a strong desire to escape from danger; anger, a strong desire to physically attack and vanquish opposition. This hypothesis is strongly supported by the outward expression of fear and anger. When the business man is conducting a struggle for existence against his rivals and when the contest is at its height, he may clench his fists, pound the table, perhaps show his teeth and he may exhibit every expression of physical combat. Fixing the jaw and showing the teeth in anger merely emphasizes the remarkable tenacity of phylogeny. Although the development of the wonderful efficiency of the hands had led to a modification of the once powerful canines of our progenitors, the teeth of our distant relatives are still seen. Indeed financial contests frequently lead to physical combats, even to the point of killing. Physical violence of the savage and the brute still lies surprisingly near the surface.

We may conclude then that any of the strong emotions as fear, anger, and sexual love drives the organs of the body into two classes—1st those organs that are useful in increasing the physical power of the body—all pulse organs are stimulated—2nd those organs that can contribute nothing to the physical prowess—these organs are inhibited—This gives us at once a key to all the digestive and metabolic disturbances due to such emotion as fear, anger, sexual love, worry, grief, etc.

The second part of this paper will be devoted to an attempt to find a principle that will explain the painful indigestions, and other painful abdominal states.

When a barefoot boy steps on a sharp stone there is an immediate discharge of nervous energy in his effort at escape from the wounding stone. This is not a voluntary act. It is not due to his own personal experience (i. e., his ontogeny), but is due to the experience of his progenitors during the vast periods of time required for the evolution of the species to which he belongs, i. e. his phylogeny. The wounding stone made an impression upon the nerve receptors in the foot similar to the innumerable injuries which gave origin to this nerve mechanism itself during the boy's vast phylogenetic or ancestral experience. The stone supplied the phylogenetic association, and the appropriate discharge of nervous

energy automatically followed. If the sole of the foot is repeatedly bruised or crushed by the stone, shock may be produced. If the stone be only lightly applied, then there is also a discharge of nervous energy from the sensation of tickling. The body has had implanted within it in a similar manner other mechanisms of ancestral or phylogenetic origin whose purpose is the discharge of nervous energy for the good of the individual.

I looked into this problem from many view-points and there seemed to be no solution until it occurred to me to seek the explanation in certain of the postulates which make up the doctrine of evolution. I realize fully the difficulty and the danger in attempting to reach the generalization which I shall make later and in the hypothesis I shall propose. There is, of course, no direct final proof of the truth of even the doctrine of evolution. It is idle to consider any experimental research into the cause of phenomena that have by natural selection required millions of years to develop. Nature has made the experiments on a world-wide scale; the data are before us for interpretation. Darwin could do no more than collect all available facts and then frame an hypothesis that best harmonized the facts. Sherrington, that masterly physiologist, in his volume entitled "The Integrative Action of the Nervous System," shows clearly how the central nervous system was built up in the process of evolution. Sherrington has made free use of Darwin's doctrine in explaining physiologic functions, just as anatomists have extensively utilized it in the explanation of the genesis of anatomical forms. I will assume, therefore, that the discharge of nervous energy is accomplished by the application of the law of inheritance and association, and that this hypothesis will explain many clinical phenomena. I shall present such evidence in favor of this hypothesis as time and my limitations will admit, after which I shall point out certain clinical facts that may be explained on this hypothesis.

According to the doctrine of evolution, every function owes its origin to natural selection in the struggle for existence. In the lower and simpler animal life, indeed, in our human progenitors as well, existence depended principally upon the success with which three great purposes were achieved, *viz.*, (1) self-defense against or escape from enemies; (2) the acquisition of food; and (3) procreation; and these were virtually the only purposes for which nervous energy was discharged. In its last analysis in a biologic sense this statement holds for man of today. Disregarding for the present the expenditure of energy for procuring food and for procreation, we will consider the discharge of energy in self-preservation. The mechanisms for self-defense which we now possess were developed in the course of vast periods of time from

the lowest forms through all the intermediary stages to our present state. One would expect, therefore, that we are now in possession of mechanisms which still may discharge energy on adequate stimulation, but are not suited to our present needs. We shall point out such examples. As Sherrington has stated, there is interposed between ourselves and the environment in which we are immersed, our skin, in which are implanted many receptors for receiving specific stimuli which are transmitted to the brain. When these stimuli reach the brain, there is a specific response principally in the form of muscular action. Now, each receptor can only be adequately stimulated by the particular factor or factors in the environment which created the necessity for the receptor in question. Thus there have arisen receptors for touch, for temperature, for pain, etc. The receptors for pain have been designated *noci-receptors* (*nocuous* or *harmful influences*) by Sherrington.

On the basis of natural selection, only the regions of the body that have been during long periods of time exposed to injury could have *noci-receptors*. On this ground the finger, because it is exposed, should have many *noci-receptors*, while the brain, though the most important organ of the body, because it has been during a vast period of time protected by a skull, should have no *noci-receptors*. Realizing that this point is a crucial one, Dr. Sloan, and I made a series of careful experiments. The cerebral hemispheres of dogs were exposed by removal of the skull and *dura* under ether anesthesia and under local anesthesia. Then various portions of the hemispheres were slowly but completely destroyed by rubbing with a piece of gauze. In some instances the hemispheres were destroyed by burning. In no instance was there more than a slight response of the centers governing circulation and respiration, and there was no morphologic change noted in a histologic study of the brain cells of the uninjured hemisphere. The experiment was as completely negative as the experiments on the spinal dog. Clinically I have confirmed the experimental findings in the course of explorations for brain tumor with a probe in conscious patients. Such explorations elicited neither pain nor evidence of altered physiologic functions. The brain, therefore contains no mechanism,—no *noci-receptors*,—the direct stimulation of which could cause a discharge of nervous energy in a self-defensive action. That is to say, direct injury of the brain can cause no purposeful nerve muscular action. In like manner, the deeper portions of the spinal region have been sheltered from trauma, and they too show but little power of causing a discharge of nervous energy on receiving trauma. The various tissues and organs of the body are differently endowed with injury receptors, or the *noci-receptors* of Sherrington.

INTERPRETATION OF SOME OF THE PHENOMENA OF CERTAIN DISEASES OF THE ABDOMEN ON THE HYPOTHESIS OF PHYLOGENETIC ASSOCIATION.

On the law of phylogenetic association, it is probable that many of the phenomena of certain lesions in the abdominal cavity become explicable. The noci-ceptors in the abdomen, like noci-ceptors elsewhere, have been established by some kind of injury to which this region has been frequently exposed over vast periods of time. On this premise, we could at once predict that there are no noci-ceptors for heat within the abdomen because during countless years the intra-abdominal region has not come in contact with heat. That this inference is correct is shown by the fact that the application of a thermocautery to the intestines when completing a colostomy in a conscious patient is absolutely painless. One could also predict the fact that there are no touch receptors in the abdominal viscera, hence no sense of touch in the peritoneum. Just as the larynx, the ear, the nose, the sole of the foot and the skin have all developed the specific type of noci-ceptors which are adapted for their specific protective purposes, and when adequately stimulated respond in a specific manner on the law of phylogenetic association, so the abdominal viscera have developed equally specific noci-ceptors as a protection against specific noxious influences. The principal harmful influences to which the abdominal viscera may have been long exposed are deep tearing injuries by teeth and claws in the course of the innumerable struggles of our progenitors with each other and with their enemies; the perforation of the intestinal tract from ulcer, injuries, appendicitis, gallstones, etc., causing peritonitis; and over-distention of the hollow viscera from various forms of obstruction. Whatever may be the connection, it is fact that the type of trauma from fighting corresponds nicely to that which in the experimental laboratory causes the most shock. Division of the intestines with a sharp knife causes no pain, but pulling on the mesentery elicits pain. Likewise, ligature of the stump of the appendix causes sharp cramp-like pains. Sharp division of gall bladder causes no pain, but distention, which is the gall bladder's most common pathologic state, produces pain. Distention of the intestines causes great pain, but sharp cutting or burning causes none. In the abdominal viscera, like the superficial parts, noci-ceptors have been presumedly developed by specific harmful influences, and each noci-ceptor is open to stimulation only by the particular type that produced it.

As we have just stated, pain is associated with the excitation of noci-ceptors, and these may take precedence over and dispossess the routine functions, such as peristalsis, secretion and absorption, of their respective nervous mechanisms, just as fear does. Hence,

the loss of weight, the lassitude, the indigestion, the constipation, and the many alterations in the function of the various glands and organs of the digestive system in chronic appendicitis, chronic gall-bladder disease, may be readily explained. This hypothesis readily explains the extraordinary improvement in the digestive functions and the general health following the removal of an appendix so slightly altered physically that only the clinical results in many cases could persuade one that this change could be an adequate cause for such far-reaching and important symptoms. It would equally explain certain gall-bladder phenomena—the indigestion, loss of weight, disturbed functions, etc. This hypothesis may supply the explanation of the disturbance from an active anal fissure, which is a potent noci-associator, and the consequent disproportionate relief after the trivial operation for its cure. Noci-association would well explain the great functional disturbances of the viscera immediately following abdominal operations.

It so happens that the leading causes of painful indigestion are extra gastric lesions—lesions of obstruction in the appendix or gall bladder, or a painful duodenal or gastric ulcer. Painless indigestion is rarely surgical and painful indigestion is usually surgical—In a personal experience of more than 4,000 cases of abdominal operations, more than half were performed for some form of painful indigestion; in the uncomplicated stages of the disease of the gall bladder, the appendix and the duodenum.

The mortality rate in my series is under one death in 400 operations. Furthermore, since operating by the new principle of Anociation, most of the immediate discomforts and most of the post operative nervous impairments are eliminated.

This paper is a plea for the recognition of man's place in nature—he is not an isolated phenomenon, but is related to all nature. On the postulates of his evolution may be found the explanation of the physical influence of fear, worry, anger, sexual love, and on the similar postulates we may understand the origin and meaning of pain. Above all it puts into our hand a new principle that governs the cause of many digestive disturbances, and a new principle of performing operations with greater safety and less discomfort and disability.

An attendance of 25 per cent. of the membership of the State Society at the Sixtieth Session is indicative of the interest taken by the physicians. They were not disappointed, the program was of the highest order. Preparations are under way for an excellent meeting in Burlington next year.

THE LIMITATIONS OF THE OBSTETRICAL FORCEPS.**Will its field of usefulness be further limited by the knife?**

Wm. L. Allen, M. D., Davenport, Iowa.

In the consideration of any means or measures which influence or assist in the delivery of the child, we must bear in mind that here, more than in any other place in the wide domain of medicine and surgery, there seem to be influences at work, or power concealed, which we cannot measure either by the pelvimeter or the opsonic index; here we find women who are anatomically sufficient, frequently collapse, and on the other hand women frail of form and of muscle, but with an endurance and expulsive power beyond belief, and also beyond our ability to previously measure. It is because of this fact, that we must not expect to be able to say absolutely that a woman with a pelvic diameter of only 8 C. M. cannot be delivered without instruments or the knife. It is because of this fact that we find a very severe case when all appearances pointed to an easy termination.

(1st) The obstetrical forceps is a scientifically devised instrument which when (a) properly applied in (b) properly selected cases, and (c) used with the proper amount of force, and (d) in the proper direction, can be a means of saving life which would otherwise be sacrificed.

(2d) The principal danger in the use of the forceps is due to the failure to previously diagnose by a thorough examination those cases which should at least as early as possible, be excluded from the so-called "simple forceps" operation, and ought to be classed as dangerous cases requiring either the knife or a high forceps operation, which latter should be classed among the capital operations.

(3d) Those excluded or selected cases, necessarily grave, must be given a proper chance in order to make possible the good results in (Elective) Caesarian Section, over those in which as a last resort the poor patient is brought exhausted and almost pulseless to seek the knife.

These border-line cases penetrate the various controversial fields in obstetrics, yet we may limit them at this time to (1) Occipito-posterior positions; (2) Transverse positions; (3) Pelvic contraction or deformities; (4) Tumors, uterine-fibroid, etc.; (5) Eclampsia; (6) Placenta Previa.

The forceps, in my opinion, is one of the two absolutely necessary instruments in our profession. It is made to fit any reasonably normal head. It should be applied parallel to the long axis of the

*Read before the Section on Obstetrics and Non-Surgical Gynecology, Sixtieth Annual Session, Iowa State Medical Society, May, 1911.

head, avoiding when possible, pressure, with the lip of the blade, the eye or the mastoid region. The question of the proper amount of force which it is safe to use is of importance. It is estimated that half of the transaction force will equal the pressure of the blade upon the fetal head—that 88 lbs. is the operator's power in traction without a fulcrum—that the fetal head will stand 176 lbs. properly applied. In my own experience from 15 to 25 lbs. traction has been the amount generally employed in low forceps operations; this amount can be applied with one hand. In high forceps over 80 lbs. has been used but with injury to both mother and child. The amount of damage done, frequently depends upon the elasticity and condition of the pelvic floor and soft parts, often the condition has been greatly weakened by long and tedious labor, the pressure of the child's head for many hours having destroyed all tissue strength. It is on account of these conditions that we find so much difference of opinion upon the use of forceps and the amount of force which can be used with safety.

It would seem hardly necessary to mention the direction in which the force **should** be applied but when you recall the error in direction applied to certain cases, you will grant this, that it is at least responsible for many lacerations with the possibility of the greater danger of the deeper injuries to the floor of the pelvis. A New York hospital reports 1446 O C-posterior cases in 41,800 confinements or 3.46% ; of these nearly 80% rotated anteriorly.

433 required operation or assistance

286 forceps with 36 fetal deaths

100 versions with 29 fetal deaths

25 manual correction

22 craniotomies—22 deaths

87 fetal deaths in the operation cases or 32% ; and in the spontaneous cases only 2 7-10% ; of the mothers there were 11 deaths in the 433 cases or 2 5-10%.

Jones of London, in 383 cases of delay in labor gives 45 O C posterior positions.

In my personal record in private practice with 1220 cases; 121 cases required the forceps operation, with one maternal death in Eclampsia; and eleven fetal deaths, seven of which were occipito-posterior cases; two were funis presentations, the child dead, and two were deaths in Eclampsia.

There were 28 cases of occipito-posterior requiring forceps; 8 breech deliveries, one of which was a spina-bifida; seven cases of Eclampsia, six requiring forceps, four of which were high forceps, and one was a contracted pelvis; two cases of funis presentation; two cases of transverse position, with one fetal death; three cases requiring Caesarian Section, two of which were due to contracted

pelvis, and one due to a large obstructing fibroid, with one maternal and one fetal death; three cases of knotted cord, one of which had two knots, and one of which caused the death of the child two days before delivery. One face presentation delivered by forceps. Three fetal deaths were due to intra-cranial clots.

In discussing the 'grave cases,' let us consider (First) those cases where labor is delayed because of inherent weakness on the part of the mother, such as anaemia, tuberculosis and heart lesion. All such patients are not necessarily lacking in severe and efficient labor pains, but uterine inertia is found in such cases frequently as well as in a degenerated condition of the uterine wall. Such patients often stand the forceps operation well and yet appear to be exhausted by the bearing down pains—this same condition I have found in two cases of severe pneumonias in which the forceps operation was well endured.

(Second) In occipito-posterior there is an unusually large fetal mortality. This condition is not reported in such a large percentage of cases by the German writers, whether it is due to the fact that a larger per cent of these cases rotate in that country due to earlier pregnancies or larger pelvis is not disclosed. I believe it is the latter for the reason that these reports show a much larger proportion of transverse positions than we have, admittedly due to the larger pelvis of the Teutonic subject. It seems by far too radical to suggest the knife in these cases, and yet we have greater difficulty in these deliveries than is found on the continent, probably for the same reason above mentioned, i. e. the narrow pelvis here, compared with those found on the continent. The occipito-posterior has been one of the most difficult to me because it has been so much more frequent than usually reported and has required so much more force than usual and with a high fetal mortality, being 25% of all those which did not rotate, with no maternal mortality but with severe perineal laceration. The use of the forceps should be delayed in these cases, until every other means shall have been tried to rotate the head, either within the pelvis or by replacing the head above the superior straits. One of the great dangers in using the forceps in these cases by the inexperienced is the failure to recognize the position of the long axis of the head, and in order to place the forceps properly the handle must be depressed to an exaggerated degree. With the forceps applied in the usual direction the blades would cross the parietal bones and rest on or near the fetal neck, and if locked would pass under the occiput and by any traction would crush the occiput, the edge of the blades pressing into the skull, the convex border crowding against the sacrum. I have seen this result in two cases by men of more than average surgical ability.

(Third) In Eclampsia the maternal mortality according to

McPherson is but 20% with forceps and 40% where the knife is used; and over 44% fetal mortality with forceps against nil in Caesarian Section. It would seem from this that the condition of the patient and the surroundings as well as the possibility of speedy delivery with forceps must be carefully considered before the knife is chosen. The difficulties in delivery in an elderly prima-parae with rigid os or narrow pelvis, and in almost any case where the head has not entered the superior straits, must be equally considered. The rapidity with which a Caesarian Section can be completed, and the fact that the patient is frequently already under anaesthesia, would lead one to the belief, that the high mortality against the knife is due to the fact that the most severe cases have been left to the knife. The possibility of an existing chronic nephritis in these cases, the excess of toxine in the blood serum and the excessive blood pressure should be studied and considered.

(Fourth) The discussion of Placenta Previa is so far outside the forceps question that it is not germane to this paper.

(Fifth) In narrow or deformed pelvis cases, the application of the forceps with or without a pubiotomy and the possibility of that worst of all operations, a craniotomy, is a subject which must be discussed and will nevertheless remain unsettled. Owing to the fact that there are many patients with a narrow pelvis and the presence of a small compressible fetal head and with strong uterine pains, who manage to pass through the ordeal of delivery without the use of the knife, and because of the fact that the maternal mortality has remained so low in these cases, the subject must warrant continued study. Gans, of Königsberg, reports 562 forceps operations in 8276 patients, of these 25 or 4.4% had an abnormal pelvis, with a fetal mortality of 20%, but he disclaims the use of the forceps because of the narrow pelvis. There were 33 operations of high forceps with a fetal mortality of 33 1-3%.

His entire report shows a maternal mortality of 3.02% of which 11 died from Eclampsia, 2 from tuberculosis, 1 of infarct of the lungs, 1 from rupture of the uterus due to resisting cervix, one due to infection preceding the forceps operation and one death due to laceration of cervix, a portion of which was included between the forceps and the head; there were many cases of fetal injury. *Davis in writing of this report says, "The results show the use of the forceps under the most favorable light in the hands of experts with modern technique." "The percentage of mortality and morbidity among mothers and children is sufficiently great to emphasize his conclusion that forceps operations are not to be undertaken except by skilled persons and with trained assistants. If improperly performed it remains in its results one of the most dangerous of obstetric procedures."

(Sixth) In tumors of the pelvis or of the uterus there should be no hesitation about arranging for Caesarian Section. There may be small cysts or pediculated fibroids which will not interfere with labor, but with large fibroids or with those involving the lower part of the uterus or cervix, the danger of delay in delivery and of rupture of the cervix or uterus is entirely too great to allow dilatory tactics. The presence of fibroids especially in elderly *primi parae* should lead one to suspect a much more serious degeneration of the uterine walls, than can readily be disclosed by an examination after the pregnancy is well advanced. These cases are dangerous in any event, but if the tumor also involves the cervix or obstructs the superior straits the knife is the only possible means to safety.

(Seventh) Transverse positions appear to be much less frequent in this country than in Germany, and although the subject is not applicable to our text, it is well to bear in mind the need of an early diagnosis; the presence of a normal cervix allowing complete dilatation is absolutely essential to the delivery of a living child; moreover an early diagnosis is necessary to a safe version operation. If the time ever comes when the life of the child shall be considered equal to the additional danger to the mother in the use of the knife, then these cases will all go to the Caesarian list.

In conclusion let us propose:

(First) That the forceps should be used in those cases in which the measurement of the pelvis and the proportionate size of the child are relative normal but the uterine pains are weak or absent, due either to an abnormal condition of the uterine muscle, or a general or systemic weakness, such as tuberculosis, anaemia or heart lesion, or on the contrary so strong as to endanger a weak heart or lung.

(Second) That the forceps should be used in O C posterior cases, only after attempting reposition in every way possible; that the forceps must be used here in preference to the knife because the degree of the difficulty is not disclosed until the head has reached the pelvic cavity or has become fixed therein.

(Third) That the forceps should be used in Eclampsia in those (1) cases where the position of the child and the relative size of pelvis and fetal head may insure a speedy termination of the labor and (2) also in those cases in which the mother's condition precludes the use of the knife. But in all cases when either from obstruction or deformity, or from a rigid os in elderly *primi parae*, difficult forceps operation is probable, an immediate Caesarian Section should offer the best results.

(Fourth) The knife should be used in Placenta Previa, when discovered in time for the proper performance of a Caesarian Section,

especially in primi parae with "unshortened and undilated cervix,"* otherwise the dilating bag and version.

(Fifth) That the knife should be used in an "Elective Caesarian" Section in all marked cases of deformities or contraction of the pelvis unless the head shall have already negotiated those straits."

(Sixth) That the knife shall be used in an "Elective Caesarian" Section in all cases of tumors involving the pelvis or the uterus to such an extent as to retard or delay delivery.

(Seventh) In transverse positions unless seen early enough to insure an easy version operation, a Caesarian Section will cut down the fetal mortality but will not necessarily lower the maternal mortality.

*Progressive Medicine 1909 and 1910.

We bespeak a careful reading of the contents of this first issue of the Journal. Of particular interest should be the Address of President Voldeng. The last reports give the State Society a net loss of 120 members the past year. Seven counties as yet have made no report to the secretary. Several counties have made incomplete reports. The secretary cannot furnish a complete mailing list to the Journal unless he has the list of the members of the component societies. The attention of those interested is called to this matter in the hope that full reports will be sent in and enable all the members to get the Journal. In a number of instances, the reports fail to give the address of the member paying his dues. This will prevent the member getting his Journal.

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The Editor of this Journal desires to express his appreciation of the honor conferred in electing him unanimously to this responsible position. It is with some misgivings that we enter upon the duties of editor-in-chief, but the patient acceptance of efforts in the past however, is a source of encouragement and we sincerely hope that every member of the society will feel an interest in aiding us in every way possible. The moral support of the profession is an element of great value in accomplishing what we have set out to do.

The 1911 Session of the Iowa State Medical Society.

This meeting was of unusual interest and the attendance large. The registration reached upwards of 500. The small number of members about the hotels and on the streets during the meetings indicated that a general interest was felt in the scientific work of the society. Of course there was a good deal of going in and out, but the extremely hot weather furnished some excuse for this. It was something of a strain to remain seated for a long period of time, listening to the reading and discussing of papers. The auditorium was large and commodious and well ventilated but being located on a busy street in a busy city, the noise was sometimes disturbing. In relation to the program, there were very few who failed to respond promptly and although rather long, it was well kept in hand by the skill of President Voldeng assisted by the chairman of sections, who had their work well planned. The able address at first thought, appeared to be rather too speculative for a practical body of medical men, but after a little reflection, the value of the

suggestions became more and more apparent and very soon the practical significance of pain began to find its way into the minds of the audience and much commendation was heard in all directions. The address on Medicine by Dr. Herriek of Chicago was a very interesting and practical discussion of some of the common diseases of the heart.

It gives us great satisfaction to be able to say that our distinguished guests were entertained in a most gracious manner by Drs. Littig and Ryan. These amenities are too often overlooked by medical men. This forgetfulness is not confined to Iowa.

A thoughtful consideration of the papers read impressed us that many of them were of considerable scientific merit, particularly in the Section of Internal Medicine. It was most gratifying to hear from our outside friends with very complimentary remarks on the good work our Society is doing and on the bright, clean and intelligent appearance of the members. It was particularly pleasing to hear Dr. Craig, formerly of Philadelphia and now of the Journal Office, say that Iowa has the best organized profession in the country. We are at home too much inclined to minimize our own merits and look beyond our own borders for the things that are worth knowing and worth doing.

Advertising.

The purpose of advertising is of course to call the attention of the public to the things a proprietor has to sell and is generally regarded as a business and not an ethical proposition. The method and manner of advertising naturally depends upon the class of people it is desired to reach. Not considering the daily press, it has been found profitable to use the magazines of various kinds, presumably because the monthly or weekly periodicals reach a more careful class of readers who might not be influenced by the newspapers. The magazine method of reaching the public has no doubt been equally profitable to the publishers themselves and has enabled publishing houses to offer to the public periodicals of considerable merit at a very low subscription price. The income from advertisements has been so attractive that magazines of the highest character have sometimes fallen into evil ways in that they have admitted to their columns, dangerous or at least harmful things, particularly in relation to health. It is to be regretted that even religious papers have sometimes been persuaded to betray the confidence of their readers by selling space to unscrupulous medicine houses. This fortunately is mainly in the past but it shows that mutual interest may influence admitted false ethical relations.

Medical journals for instance, have decried quackish things and then at the same time admitted into their advertising columns for a money consideration, the very things they condemned. The excuse has always been that the editor was not responsible for what the advertiser said, but is this ethically true? We think not. Medical journals have no doubt been responsible to a considerable degree for an immense development of proprietary medicine in recent years, but not perhaps intentionally but incidentally from a desire to maintain a successful (financially) medical journal.

It seemed at one time that the country was to be overrun and controlled by trusts and combines and that the medical profession was likewise to be controlled by proprietary medicine combines and that a large body of the medical profession were to serve as local agents for their products. It was indeed a delightful period in our professional career when we could have presented at our hand a compound that exactly fitted the troublesome case, and what a comfort it was when we could gather up armfuls of samples at a meeting of the A. M. A. and state societies under influences we need not mention. This condition of affairs has nearly disappeared, and we have come back to our own intellectual resources for ways and means to treat disease.

The virtues of these various compounds were constantly set before us in the advertising pages of many of our medical journals, but for one reason or other, this business has nearly ceased to exist and the profits from this source have become very materially lessened. The most important factor in this improvement is professional public sentiment, which is in our opinion in advance of the advertising policy of many of our medical journals. It is unquestionably true that the commercializing influence of pernicious advertising is detrimental to the independence of medical journals. It would seem that of all commercial interest, the proprietary medicine establishments are the most exacting. They seem to feel that it is a right guaranteed to them in some way to impose upon the public without let or hindrance, even at the expense of life and health: "the Bureau of Chemistry" and "doctor's trust" (A. M. A.) and all medical journals that have declared their independence and have dared to employ open methods of informing the public of the nature of the grafts pertaining under the names of "food, beverages and drugs," have fallen under their displeasure. The journals therefore that depends to a considerable degree upon this class of advertising must feel the heavy hand of displeasure and be guarded in what they say.

The Journal of the Iowa State Medical Society has decided to keep free from such entanglements and will start out without any

commercial relations with advertising agencies. It will be conducted for the present at least, as a purely literary magazine, depending entirely upon the financial resources of the State Society.

The Journal.

At the May Session of the Iowa State Medical Society, the policy of owning its own journal was adopted. This policy is not new except to our own society. Most of the older and stronger societies have for several years owned and managed their own organ, apparently to the satisfaction of the members. It can hardly be presumed however that these journals have escaped unfriendly criticism altogether. No doubt members have sometimes felt that the editor should have brought the journal to a higher standard of literary merit, that the original matter should have been of better quality, etc., etc. All this may be true and the criticisms may have been just, but it must be kept in mind that the work in the state societies is eminently practical; that these bodies are organized for the purpose of cultivating a knowledge of the best practical and scientific work, while original research and theoretical speculation will find its way to the profession through scientific periodicals devoted to special things.

It is a little early to say just what course we shall pursue but the suggestion comes to us that we should cultivate a close relation with the county societies, and publish a directory of the component societies, giving the names of the presidents and secretaries and their addresses and time and place of meeting. We shall make personal effort to interest the members of the profession who have not yet discovered the advantages of society affiliation. We have for many years entertained the belief that the county society should be the training school for the young man who has an ambition to be heard from. It must be apparent to most reflecting minds that the young man who has not been heard from in his local society will not be listened to very patiently by the larger audience of state or national associations, even if he has something of value to say.

The Journal will solicit productions of merit which the local societies will recommend for publication.

We are not at present much impressed with the value of extensive abstracts from current medical literature but will in an editorial way draw attention to special matters of interest by more or less extensive references. We shall make an effort to lay before our readers, matters of professional interest occurring beyond the border of our own state. It will also be our purpose to keep informed in relation to questions of medical policy within our state and give them liberal editorial attention. To accomplish what we

have outlined, we shall make liberal use of the gentlemen whom the society has at one time or another honored by electing them to some position of responsibility and we shall be constantly on the lookout for young men who ought to be better known and who only lack the opportunity.

The Society.

The membership of the State Society is approximately two thousand, it should and can be three thousand. Every reputable, qualified physician in the state should be in the society. Many good men do not realize the needs, necessities and advantages of the medical organizations. Without them there would be no progress—either scientifically or politically. Repeated intercession is necessary to get these men into the society. A united and active profession is imperative. All those forces which are opposed to the medical profession are well organized and thoroughly active. The members of the Council are willing and anxious in any way deemed advisable to arouse an interest, in medical societies; to promote a better feeling; increase the membership, power and standing of the Society. The first requisite of a good society is a live and enthusiastic secretary; naturally, then, good programs will be prepared; a good attendance results from a good program, increase in interest, attendance and membership naturally follows. The Journal will give a prominent place to county and district programs and reports. A directory of the competent societies will be published as often as deemed advisable during the year. It is expected that every county and district society secretary will furnish programs, newspaper write-ups and full reports. Send this material to the Associate Editor of the The Journal at Washington. A few of the societies have not made a report. Several lack complete reports.

Society News.

The meeting of the American Medical Association in Los Angeles the past month proved a strong attraction for the Iowa physicians and their friends. A large enough number undertook the trip to render a special train a necessity. Three Pullmans, a diner, baggage and observation car made up the train. Quarters were reserved for the party at the Hotel Alexandria. The following physicians made the trip: Dr. Granville Ryan, Dr. W. L. Bierring, wife and two daughters, Dr. and Mrs. J. W. Cokenower, Dr. W. Van Werden, Dr. and Mrs. T. F. Kelleher, Dr. and Mrs. G. H. Sumner, Dr. and Mrs. F. E. V. Shore, Dr. R. A. Robertson, Dr. A. J. Field, Dr. and Mrs. M. N. Voldeng, Cherokee; Dr. A. L. Wright, Carroll; Dr. and Mrs. Van Buren Knott, Sioux City; Dr. and Mrs. J. M. Knott,

Sioux City; L. L. Bond, Denison, Dr. and Mrs. James B. Guthrie, Dubuque; Dr. and Mrs. B. H. Sherman, Dexter; Dr. and Mrs. J. C. Powers, Hampton; Dr. and Mrs. D. S. Fairchild, Clinton; Dr. and Mrs. E. Heneley, Nora Springs; Dr. and Mrs. Paul Gardner, New Hampton; Dr. G. W. Fellows, Olin; Dr. and Mrs. J. G. Evans, New Hartford; Dr. and Mrs. A. Crawford, Mount Vernon; Dr. and Mrs. W. T. Speaker, Manson; Dr. A. B. Bowen, Maquoketa; Dr. and Mrs. T. J. Williams, Hiteman; Dr. and Mrs. H. W. Thornburg and mother of Redfield; Dr. Emma Branworth, Muscatine; Dr. and Mrs. J. C. Newton, Exira; Dr. Laura H. Branson, Iowa City; Dr. and Mrs. W. C. Hand, Hartley; Dr. and Mrs. N. C. Johnson, Thurman; Dr. A. J. Zook, Adair; Dr. and Mrs. Henry Albert, Iowa City; Dr. and Mrs. E. Hornibrook, Cherokee; Dr. and Mrs. E. C. Leffler, Marshalltown, and Dr. and Mrs. D. C. Brookman, Ottumwa.

Society Reports.

During the commencement week the Drake University Medical Alumni held a banquet at the Savery hotel. Thirty-six were present. Dr. W. S. Conkling was toast master and in his pleasing manner introduced Dr. Lewis Schooler who responded to the toast, "The early Days of Drake Medical College." He not only told of the early professors but also of incidents that have never been recorded. Dr. H. S. Huckins of the Keokuk Medical College, which has so recently merged with Drake University, related the many facts concerning that school which is the oldest school in Iowa, founded in 1846. Dr. W. W. Pearson, the Dean, responded to the toast "Troubles" the central theme being, that with the growth of the college the responsibilities increase proportionately and that it is the aim of the college to continue to be in the front ranks of the times. Drs. C. C. Shope, Lenna Meanes, Geo. Keeney were also called upon.

What met with much enthusiasm, was the proposal of a two days clinic medical, surgical and laboratory work, connected with the banquet next year where the alumni may see the real workings of the college and go home feeling their time well spent. Dean Pearson said the college would do its part to insure a success. A committee was appointed to launch the clinic project. They wish the co-operation of every alumnus to make a success.

Dr. W. W. Pearson was voted in as honorary member of the alumni association as our former deans Dr. David S. Fairchild and Dr. Lewis Schooler were at previous meetings.

The officers elected for the ensuing year are Dr. C. F. Smith, president; Dr. H. S. Huckins, vice-president; and Dr. E. B. Mountain, secretary and treasurer.

**MINUTES OF PROCEEDINGS OF HOUSE OF DELEGATES,
WEDNESDAY, MAY 17, 1911, 9:30 P. M.**

President M. N. Voldeng, Presiding.

The roll of delegates was called, 34 delegates and 9 councilors responding.

The Secretary presented his report, which was referred to the Finance Committee.

SECRETARY'S REPORT.

The following is the annual report of the Secretary:

No. of counties reported to date—92.

Total of members paid to date—1839.

Counties not yet reported: Clarke, Clayton, Jones, Palo Alto, Pocahontas, Crawford.

The following orders were issued during the fiscal year:

No.

467	V. L. Treynor, Salary, desk supplies, etc.....	\$776.99
468	Woodford & Ainsworth, badges and programs.....	29.00
469	Ira K. Gardner, Councilor expense.....	2.00
470	E. E. Dunkelberg, Councilor expense.....	7.00
471	C. J. Saunders, Councilor expense.....	6.60
472	D. Jackson, Councilor expense.....	9.34
473	T. M. Throckmorton, Councilor expense.....	9.34
474	E. Hornibrook, Councilor expense.....	18.86
475	E. Burd, Councilor expense.....	11.36
476	J. W. Cokenowner, Councilor expense.....	8.50
477	C. A. Boice, Councilor expense, Secretary of Council....	66.61
478	L. W. Littig, Councilor and Medico-Legal Com. expense.	26.75
479	G. E. Crawford, Stationary and Postage.....	10.00
480	H. C. Eschbach, Councilor expense.....	14.67
481	W. B. Small, salary and expense.....	166.33
482	J. W. Osborn, expense of Com. of Arrangements.....	35.30
483	Wm. Jepson, Davis Memorial.....	300.00
484	E. E. Dorr, 4th quarter Iowa Journal.....	664.70
485	Woodford & Ainsworth, stationary.....	6.50
486	Luella Nash, transcribing proceedings of meeting, Reporting minutes House of Delegates, Postage ..	81.39
487	E. E. Dorr, 1st. quarter Journal	580.94
488	W. B. Small, Bond of Treasurer	20.00
489	E. E. Dorr, 2nd. quarter Journal	595.32
490	E. E. Dorr, 3rd. quarter Journal.....	609.38

4074.31

The Treasurer presented his report, which was referred to the Finance Committee.

REPORT OF TREASURER.

Balance on hand as reported at last meeting \$9,135.71

May 25	Order No. 467	V. L. Treynor, salary, desk supplies	776.99
May 25	Order No. 468	Woodford & Ainsworth, stationary,	
	badges		29.00
May 25	Order No. 469	Ira. K. Gardner, Councilor expense	2.00
May 25	Order No. 470	E. E. Dunkelberg, Councilor ex- pense	7.00
May 25	Order No. 471	C. J. Saunders, Councilor expense	6.60
May 25	Order No. 472	D. Jackson, Councilor expense . .	16.65
May 25	Order No. 473	T. M. Throckmorton, Councilor expense	9.34
May 25	Order No. 474	E. Hornibrook, Councilor expense	18.86
May 25	Order No. 475	E. Burd, Councilor expense	11.36
May 25	Order No. 476	J. W. Cokenower, Councilor ex- pense	8.50
May 25	Order No. 477	C. A. Boice, Councilor expense . .	66.61
May 25	Order No. 478	L. W. Littig, Councilor, Medico Legal expense	26.76
May 25	Order No. 479	Geo. E. Crawford, expense sta- tionary and postage as President of I. S. M. S.	10.00
May 25	Order No. 480	H. C. Eschbach, Councilor expense	14.67
May 25	Order No. 481	W. B. Small, Salary, desk supplies	166.35
May 25	Order No. 482	J. W. Osborn, Chairman Com. on Arrangements, Clerks, and expense of local com- mittee	35.30
May 28	Order No. 483	Wm. Jepson, for Davis Memorial Fund	300.00
June 1.	Wade, Dutcher & Davis, Legal services in defense of cases to April 1, 1910, as per bill rendered as re- tainer from Jan. 1910 to April 1, 1910		310.10
June 1	Sam C. Smith, Defense of Dr. Hutchison, in case of Hornback vs. Hutchison		25.00
June 1	Edwards & Gregory, Defense of Drs. Jaynes & Pel- letier in case of Jaynes & Pelletier vs. Milo W. Lewis and case of Gertrude Lewis vs. Jaynes & Pelletier		50.00
June 1	Buckley & Calderhead, Defense of Dr. Prescott, in case of Secor vs. Prescott		100.00
June 20	Paul R. Burroughs, Sec'y. Butler County Medical Society on account of overdraft		3.00
June 20	A. Moorman, Sec'y. Dallas-Guthrie County Medical Society on account of overdraft		3.00
July 1	Order No. 484	Iowa Medical Journal, 4th. quarter, 1910	664.70
July 13	Order No. 485	Woodford & Ainsworth, station- ary	6.50
July 18	Order No. 486	Luella Nash, Transcribing Pro- ceedings of State Society	81.39
Aug 5	Wade, Dutcher & Davis, Legal services in defense cases to July, 1910 and Retainer from April 1, 1910 to July 1, 1910		524.85
Sept. 26	Order No. 487	Iowa Medical Journal 1st. quarter 1911	580.94

Sept. 26	Order No. 488 W. B. Small, for C. Stilson & Son bond of Treasurer	20.00
Oct. 21	Wade, Dutcher & Davis, Legal services in defense cases to Oct. 1, 1910 and Retainer from July 1, to Oct. 1, 1910	214.38
Dec. 19	Order No. 489 Iowa Medical Journal 2nd. quarter 1911	595.32
Jan. 9.	Wade, Dutcher & Davis, Legal services in defense cases to Jan. 1, 1911 and Retainer from Oct. 1, 1910 to January 1, 1911	619.47
Feb. 7.	Edwin A. Church, defense of Dr. J. D. Lyons, in case of A. Zimmer vs. J. D. Lyon	25.00
Mar. 22	Order No. 490 Iowa Medical Journal 3rd. quarter 1911	609.38
April 15	Wade, Dutcher & Davis, Legal services in defense cases to April 1, 1911 and Retainer from Jan. 1, 1911 to April 1, 1911	747.89
April 25	D. S. Fairchild postage and expenses	40.79
April 25	Rosa E. Lowder, Sec'y. Jackson County Med. Society on account of overdraft	2.00
May 17	Interest for year	254.83
May 17	Membership fees during year to date	5,737.00
May 17	Disbursements for year	6,729.59
May 17	Balance on hand	8,397.96
		<hr/>
		15,127.55 15,127.55

E. E. Dunkelberg, made a verbal report on behalf of the Council, which was upon motion accepted.

D. S. Fairchild, in reporting for the Medico-Legal Committee read a summary of cases prepared by Hon. M. J. Wade, legal advisor and counsel, which was upon motion duly accepted.

CONDENSED REPORT OF CASES AGAINST MEMBERS OF THE IOWA STATE MEDICAL SOCIETY.

To

Dr. D. S. Fairchild,
Dr. L. W. Littig, and
Dr. A. L. Wright,

Medical Defense Committee.

Gentlemen:

We have submitted a full report upon all cases pending at the date of our last report and commenced since that date. The following is a summary of all cases commenced since the establishment of the medical defense department of your association:

Cases commenced since organization of defense fund	38
Cases commenced prior to the report of 1909.....	15
Cases commenced 1909—1910	13
Cases commenced 1910—1911	10
Cases pending at the date of the 1909 report	7
Cases pending at the date of the 1910 report	10
Cases now pending	14
Total cases disposed of	24

NATURE OF CASES.

Conspiracy to have plaintiff declared insane	1
Fracture of arm	8
Fracture of leg	6
Appendicitis—sponge case	1
Appendicitis—malpractice in operation	1
Appendicitis—exploratory opening	1
Childbirth, alleged failure to attend after alleged agreement to do so; child died (separate actions by father and mother)	2
Hand crushed, alleged improper treatment	1
Eye, alleged improper treatment	1
Infection, childbirth	2
Medical treatment of child	1
Abortion, improper after-treatment	1
Stomach trouble, alleged improper treatment and failure to treat	1
Anesthetic, death under	1
Improper diagnosis of broken ribs	1
Improper diagnosis of diphtheria	1
Removal of uterus, alleged negligence, incision of the bladder	1
X-Ray burn	1
Infection following amputation	1
Alleged improper treatment of scald	1
Removal of adenoids	1
Alleged improper abdominal incision	1
Total amount of damage claimed in all cases to date	\$372,489.00
Judgment recovered against members	none
Consultation on cases threatened in which no proceedings were had	18

Iowa City, Iowa, May 13, 1911.

V. L. Treynor, M. D.,

Council Bluffs, Iowa.

Dear Doctor :-

I am enclosing you a statement of expenses of the Committee for the year commencing April 1st, 1910 to April 1st, 1911.

Legal expenses	\$2,106.59
Personal expenses-five days in court-Crawford case	14.66
Postage	3.48
Total	\$2,124.73

Yours Truly,
D. S. FAIRCHILD.

T. F. Duhigg, presented the report of the committee on Public Policy and Legislation. The report was upon motion received, and the expense account referred to the Finance Committee.

May 20, 1911.

Iowa State Medical Society,
Des Moines, Iowa.

Gentlemen :

I respectfully submit the following synopsis of the legislation

enacted in the 34th General Assembly in the interest of public health.

Beneficial Bills passed:

Antitoxin Bill carrying an appropriation of \$2000.

Salary of secretary of State Board of Health raised from \$1200 to \$3000 a year.

Appropriation of \$2000 to vital statistics department.

An appropriation of \$3600 for clerk hire in the secretary's office. The previous allowance for help was \$900.

Vasectomy Bill which permits sterilization of criminals, idiots, and imbeciles.

Disinfection of premises previously occupied by cases of tuberculosis and infantile paralysis.

The Board has been given the power to fumigate and disinfect premises previously occupied by cases of any disease, which in their judgment requires this precaution. It will be observed that it is compulsory with regard to tuberculosis and infantile paralysis, while it is optional with the Board when other diseases are considered.

Important bills that should have been and were defeated:

Osteopathic Bill which would have conferred upon them greater liberties in the practice of medicine and surgery, and which contemplated the creation of a separate Board of Examiners for Osteopaths. The board to be composed of Osteopaths.

Bill by Miller of Bremer aimed to discredit the profession generally by making it illegal to perform surgical operations without the patient's consent (!); to prevent fixing the standard fees; to make illegal the insurance features of the State Society, etc.

Bills that were held by the Sifting Committee and were not passed for lack of time. They were not defeated, and will be passed some time, as they all have merit which the committees that had them in charge recognized:

Reorganization of the State Board of Health reducing the number of members to five, each of whom shall receive a flat salary of \$900. Further, it contemplated organizing the office of the Board of Health after the general plan followed in organizing the higher State offices. It provided for payment of printing, stationary and miscellaneous expenses from the fund out of which the expenses for other State offices are paid. Reorganization of the Board on that basis will relieve the drain on the annual appropriation for the Health Dept. This Bill passed the Senate and was not brought up on the floor of the House for lack of time.

A Bill fixing the preliminary standard of education of candidates who appear before the State Board of Medical Examiners for a license to practice medicine.

A Bill which contemplates giving the State Board of Health the power to quarantine any disease which in their opinion should be quarantined, by inserting the word "communicable" disease instead of naming the diseases that are to be quarantined.

House File No. 247 defines ice cream, fruit ice cream and nut ice cream by stating maximum amount of ingredients which they shall contain if placed upon the market for sale to the public under the above names.

House File No. 129 provides for the appointment of a Dairy Commissioner, Deputy Commissioner and State Dairy Inspector and fixes their salaries; regulates the sale of milk and ice cream and pro-

vides penalties for violation thereof and repeals all acts in conflict therewith.

Senate File No. 335 gives the State food and Dairy Commissioners authority to appoint as many assistants as are necessary, at a salary not to exceed \$1600 per year, to assist in enforcing laws calculated to prevent misbranding of food.

An article of food is said to be "misbranded" 1st, if sold under the name of some other article. 2d, if labeled in a manner calculated to deceive by claiming foreign manufacture. 3d. Each can of baking powder must give the amount of ingredients contained therein.

4. Words "mixture", "compound", "combination", "imitation", "blend", etc. must be placed upon such preparations, unless the names of ingredients shall appear on the label in continuous list with intervening matter, immediately following the phrase "mixture of", "compound of", "combination of", "blend of" as the case may be, such names to appear in the order of the amount of the ingredients beginning with the ingredient present in greater proportion.

All letters used in naming ingredients must be the same style and color as in the phrase "mixture of", "compound of", etc. The letters to be in distinct English, no smaller than eight point heavy gothic caps.

A food is said to be adulterated if an ingredient is used which lowers, reduces or injuriously effects its quality, strength or purity: If a different ingredient is used instead of the one named, it constitutes substitution: If a valuable part is abstracted in whole or in part: If less than the standard by law of any ingredient is used: If mixed, colored, powdered, coated or stained to conceal inferiority: If poisonous, if injurious to health, if saccharinated or put up with formaldehyde.

If whole or part of diseased, filthy, decomposed or putrid meat is used whether manufactured or not or if dead by accident or otherwise than by slaughter.

The purity of candy and vinegar are standardized.

For the enforcement of the provision of the foregoing, an appropriation of \$21000 is provided to cover cost of analysis, traveling and miscellaneous expenses.

Very Respectfully,

THOMAS F. DUHIGG, Sec'y.

Committee on Legislation and Public Policy Iowa State Medical Society.

The report of the Committee on Necrology was read by C. A. Boice, and upon motion received.

REPORT OF THE COMMITTEE ON NECROLOGY.

1. Oscar Fordyce of Guthrie Center, for many years an active member was killed in an automobile accident.
2. L. Drakely Rood, August 8, 1910, for nineteen years an active practitioner in Des Moines.
3. L. F. Summers, of Milton, Feb. 5, 1911. While in the legislature he was active in securing the passage of the bill to create the State Tuberculosis Hospital.
4. William Watson, for half a century a prominent physician of Dubuque and of the State, died at the home of his son in Chicago,

Nov. 21, 1910. He was President of the Society in 1868.

5. Chas. W. Vroom, at Whitten, Jan. 8, where he had been in practice since 1887.
6. W. J. McEvilly, of Dysart, was killed by a collision between his auto and a train near Chicago, July 19, 1910.
7. W. L. Duffin, a pioneer physician of Guttenberg, died at his home June 24, 1910.
8. J. A. Scroggs, of Keokuk, President of the State Society in 1903, an active member of the State Board of Health and of the Keokuk Medical College for many years, died Aug. 23, 1910.
9. John S. Lewis of Dubuque, Sept. 14, 1910. A valued and respected member of the profession.
10. Lucius French of Davenport, a prominent physician, several times President of the Scott County Medical Society, Sept. 19, 1910.
11. G. E. Miller, of Sanborn was killed in an automobile collision near Sioux City Oct. 16, 1910.
12. A. A. Deering of Boone, Dec. 3, 1910. One time Secretary of this Society and always active in professional progress; for twenty years secretary of the Central District Medical Association; formerly postmaster of Boone; a director of the Ericson Library and the Eleanor Moore Hospital; age 65.
13. B. F. Keables, of Pella, aged 82, died May 8, 1911, an active practitioner well respected in the community where he lived so many years.
14. J. P. Harrel, a graduate of the College of Physicians and Surgeons of Keokuk in 1892. A resident of Burlington.
15. H. J. Dean, died at his home in Muscatine, April 26, 1911, after an illness of two months. A practitioner of recognized ability along the special line of Eye and Ear work.

A communication from the Secretary of the A. M. A. in regard to plan of organization was read by the Secretary, and upon motion of W. B. Small laid on the table.

H. A. Leipziger extended an invitation to the Society to hold its next annual meeting at Burlington, which invitation was referred to the Committee on Nominations.

Upon motion the House of Delegates adjourned to 8:00 A. M. Thursday May 18.

MINUTES OF PROCEEDINGS OF HOUSE OF DELEGATES, THURSDAY, MAY 18, 1911, 8:00 A. M.

President Voldeng, Presiding.

The roll was called by the Secretary.

The committee on Constitution and By-Laws presented its report, covering an amendment offered one year ago by L. W. Littig. Upon motion, duly seconded, the amendment was adopted as amended.

The Amendment of the Constitution, proposed by L. W. Littig was amended and adopted as follows:

Resolved, that Section 1, Article IV, of the Constitution of the Iowa State Medical Society, which reads, "This Society shall consist of Members, Delegates and Guests, and Life Members," be amended by inserting the words "and Associate Members" between

the words "Members and Delegates", the amended section to read: "This Society shall consist of Members, Associate Members, Delegates and Guests, and Life Members."

And, be it further

Resolved, that an additional section be added to Article IV. of the Constitution of the Iowa State Medical Society, said section to be known as "Section VI. of Article IV. of the Constitution", as follows:

SECTION VI. ASSOCIATE MEMBERS. Teachers in any regular medical school, resident in Iowa, in no manner engaged in the practice of medicine, and not otherwise eligible to regular membership, may become ASSOCIATE MEMBERS of this Society, when elected ASSOCIATE MEMBERS of the component Society of the county in which said teachers live. Such members shall be designated ASSOCIATE MEMBERS: they shall enjoy the same privileges as regular members and shall be subject to the same conditions.

D. C. Brockman presented the report of the committee appointed one year ago to consider the matter of establishing a Journal of the Iowa State Medical Society.

REPORT OF COMMITTEE ON PUBLICATION.

To the House of Delegates, Iowa State Medical Society.

Gentlemen:

Your special Committee on Publication appointed a year ago, beg leave to report as follows:

First: That the House of Delegates establish an official journal of the Iowa State Medical Society, and that the same be called the Journal of the Iowa State Medical Society.

Second. That this Journal be published monthly and mailed not later than the 15th of the month, and that it contain the papers and proceedings of the Annual meeting and such other matter as is of interest to the members.

Third. That the Journal contain not less than 48 pages per issue. That the editorials be given a prominent part, 3 to 6 pages per issue being devoted to them.

Fourth. That an editor be elected by the House of Delegates for a period of three years and be paid a salary of \$1500 per annum, payable in quarterly installments. This amount to include all office assistance and rent.

Fifth. That an allowance be made for necessary office supplies and postage.

Sixth. That \$500 or so much thereof as be needed be turned over to the Committee on Publication for the purchase of necessary office furniture. That the printing and mailing of the Journal be let by the Committee on Publication on yearly contract conforming to required specifications.

Seventh. That any advertising contract now held by Dr. Dorr which the Society desires to carry be purchased, paying therefore 50% of all moneys received therefrom for the first year. Payment to be made semi-annually and that this be considered as full compensation to Dr. Dorr for any rights which he may have.

Eighth. That the advertising policy be that of the Journal of the A. M. A.

Ninth. That a commission of 25% be paid to the editor for acceptable advertisements and that 15% be paid for acceptable renewal.

Tenth. That the Committee on Publication have oversight of the publication of the Journal subject to the order of the House of Delegates. That the Committee on Publication shall audit the books of the Editor, fill vacancies as they occur, and authorize any contract

Eleventh. That the Committee on Publication together with the Editor shall have editorial control of the Journal, shall provide for and superintend the publication and distribution of all proceedings, transactions, and memoirs of the Society.

Twelfth. All reports on scientific subjects and all scientific discussions and papers heard before the Society shall be referred to the Journal for Publication. The Editor with the consent of the majority of the Committee on Publication may curtail or abstract papers and discussions, and may return any paper to the author which is not considered suitable for publication.

Thirteenth. All moneys received by the Editor shall be turned over to the Treasurer at the end of each month.

May 17, 1911.

D. C. Brockman,
Walter L. Bierring,
Clyde A. Boice.

L. W. Littig moved that the report be made a special order for consideration Friday morning. (Duly seconded.)

W. B. Small moved to amend by making it a matter of special consideration for four o'clock this afternoon. (Duly seconded.)

A further amendment making the hour five o'clock this afternoon was accepted by Dr. Littig, and the motion as amended was submitted and carried.

Upon motion, the House of Delegates adjourned to 5:00 p. m., Thursday, May 18.

V. L. TREYNOR, Secretary.

MINUTES OF PROCEEDINGS OF HOUSE OF DELEGATES, THURSDAY, MAY 18, 5:00 P. M.

President Voldeng presiding.

D. S. Fairchild was called upon by the President, and referred to the decision of the Post Office Department to the effect that non-subscription publications carrying advertising would not be carried in the mails after Oct. 1st next, as second class matter. He then outlined a plan for the publication of the Journal of the Iowa State Medical Society.

A PLAN FOR THE PUBLICATION OF THE JOURNAL OF THE IOWA STATE MEDICAL JOURNAL.

Income of Society \$4,000 a year.

Expenses, including salary of treasurer and printing of Journal, \$2,000.

Leaving a balance of \$2,000 for the salary of editor and secretary of the society.

It will therefore be seen that there is not sufficient amount of money to pay any man to give his whole time to this work. It will,

therefore, be necessary that this work be divided among several persons who are willing to devote a portion of their time to the interests of the Society.

The House of Delegates should elect an editor and a secretary.

The House of Delegates should also elect a committee on Medical Journal of five members, of which the editor and secretary should be members. It should be the duty of this committee in connection with the editor and secretary to define the policy of the Journal and take supervision of the work. The secretary should be assistant editor in charge of certain work which would naturally come under his supervision. For instance, the work of the local societies, the making up of a directory of the local societies and of physicians of the state. The editor-in-chief should have charge of the Journal as a whole and outline its policy. He should be chairman of the committee.

The committee of three members not including the editor and secretary should be men that would take a personal interest in the publication and together with the editor and assistant editor determine directly the character of the Journal and organize the details of the work. It cannot at this time be determined just what these details might be, nor would it be good policy to do so. The experience of the future and the circumstances that may arise would make it necessary from time to time to modify or change some of the plans. There should be occasional meetings of the Board to discuss matters relative to the Journal. The question of editorials, the question of abstracting medical literature and the book reviews would necessarily constitute a part of the Journal plan which may need modification from time to time.

The Journal plan then includes:

- (1) The election of an editor.
- (2) Election of a secretary who may act as assistant editor.
- (3) Election of a special committee on publication of the Journal.

It must be understood that the editor-in-chief shall be a responsible officer and report to the Committee and through the Committee to the House of Delegates.

Dr. Brockman, chairman of the Journal Committee, stated that under the ruling of the Post-Office Department the postage on the Journal with advertising would be raised from one cent a pound to one cent for four ounces, and that it would be well worth while to continue the advertising and pay the additional rate of postage.

Upon motion of Dr. Littig consideration of the report of the Journal Committee was taken up seriatim, as follows:

1. That the House of Delegates establish an official journal of the State Medical Society, and that the same be called the Journal of the Iowa State Medical Society.

Upon motion of Dr. Sugg, Section 1 was adopted.

2. That this Journal be published monthly and mailed not later than the 15th of the month, and that it contain the papers and proceedings of the annual meeting and such other matter is of interest to the members.

Upon motion, Section 2 was adopted.

3. That the Journal contain not less than 48 pages per issue. That editorials be given a prominent part, 4 to 6 pages per issue being devoted to them.

Dr. Littig moved the adoption of all of the section preceding the figure 4, leaving to the judgement of the editor how much space should be devoted to editorials. (Duly seconded.)

Dr. Sugg moved to amend the motion by increasing before the figure 4 the words "not less than," and striking out the words "to 6" in the section as reported by the committee. Duly seconded.)

Dr. Dunkelberg spoke against the amendment, which was thereupon withdrawn by Dr. Sugg, with the consent of his second.

Dr. Littig's motion was submitted and carried.

4. That an editor be elected by the House of Delegates for a period of three years and be paid a salary of \$1500 per annum, payable in quarterly installments; this amount to include all office assistance and rent.

Dr. Small moved as a substitute the following:

"That an editor be elected by the House of Delegates for a period of three years; his salary to be left with the Board of Trustees, to be paid quarterly, and to include all office assistance and rent." (Motion duly seconded.)

Dr. Dunkelberg moved to amend by striking out the words, for a period of three years. (Duly seconded.)

Dr. Littig moved that consideration of Section 4 be deferred until to-morrow morning. (Duly seconded.)

An amendment to defer consideration until the balance of the report has been acted upon was accepted by Dr. Littig, and the motion to defer was thereupon submitted and carried.

5. That an allowance be made necessary office supplies and postage.

Upon motion, Section 5 was adopted.

6. That \$500, or so much thereof as be needed, be turned over to the Trustees for the purchase of necessary office furniture. That the printing and mailing of the Journal be let by the Trustees on yearly contract conforming to required specifications

Dr. Littig moved to amend by substituting \$100 for \$500.

The motion was duly seconded carried, and Section 6 as thus amended was adopted.

7. That any advertising contract now held by Dr. Dorr, which the Society desires to carry be purchased, paying therefor 50% of all moneys received therefrom for the first year, payment to be made semi-annually; and this be considered as full compensation to Dr. Dorr for any rights which he may have.

Dr. Littig moved to amend the section by substituting 100% in place of 50%. (Duly seconded.)

Dr. Dorr was called upon by the President and made a statement of the cost of obtaining advertising.

Dr. Brockman made a statement of the considerations which caused the committee to make its report touching the allowance to be made to Dr. Dorr for advertising contracts.

Dr. Littig's amendment was discussed by Drs. Cokenower, Osborn, Sugg, and Dunkelberg.

Dr. Dunkelberg moved as an amendment to the amendment that all of the section after the words "Dr. Dorr" in the first line of the section be stricken out, and by adding thereto the words, "be settled between the Board of Trustees and Dr. Dorr as they may agree." (Amendment seconded by Dr. Thompson.)

Dr. Dunkelberg's amendment was submittend and declared lost.

After further discussion by Drs. Osborn, Small, Kime and Thompson, Dr. Littig's amendment was submitted and declared carried. Section 7 was thereupon adopted as amended.

8. That the advertising policy be that of the Journal of the A. M. A.

Upon motion, duly seconded, Section 8 was adopted.

9. That a commission of 25% be paid to the editor for acceptable advertisements, and that 15% be paid for acceptable renewals.

Upon motion of Dr. Small, Section 9 was stricken out of the report.

10. That the Committee on Publication have oversight of the publication of the Journal, subject to the order of the House of Delegates. That the Trustees shall audit the books of the Editor, fill vacancies as they occur, and authorize any contract which may be necessary. Dr. Dunkelberg offered an amendment authorizing the Committee on Publication to fill vacancies.

Upon motion, Section 10 was adopted as amended.

11. That the Committee on Publication, together with the Editor, shall have editorial control of the Journal, shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Society.

Upon motion, Section 11 was adopted.

12. All reports on scientific subjects and all scientific discussions and papers heard before the Society shall be referred to the Journal for publication. The editor, with the consent of the majority of the Committee on Publication, may curtail or abstract papers and discussions, and may return any paper to the author which is not considered suitable for publication.

Upon motion, Section 12 was adopted.

13. All moneys received by the Editor shall be turned over to the Treasurer at the end of each month.

Upon motion, Section 13 was adopted.

Re-consideration of Section 4 was taken up.

Dr. Small re-introduced his substitute for Section 4, and moved its adoption, as follows:

"That an editor be elected by the House of Delegates, his salary to be fixed by the Trustees, to be quarterly, and to include all office assistance and rent."

The motion was duly seconded and carried.

Upon motion of Dr. Small, the report of the Journal Committee as amended was adopted as a whole.

REPORT OF COMMITTEE ON PUBLICATION.

Upon motion of Dr. Small, the report of the Journal Committee as amended was adopted as a whole.

First. That the House of Delegates establish an official Journal of the Iowa State Medical Society, and that the same be called the Journal of the Iowa State Medical Society.

Second. That this Journal be published monthly and mailed not later than the 15th of the month, and that it contain the papers and proceedings of the annual meeting and such other matter as is of interest to the members.

Third. That the Journal contain not less than 48 pages per issue. That the editorials be given a prominent part.

Fourth. That an editor be elected by the House of Delegates his salary to be fixed by the Trustees, to be paid quarterly, and to include all office assistance and rent.

Fifth. That an allowance be made for necessary office supplies and postage.

Sixth. That \$100 or so much thereof as be needed be turned over to the Trustees for the purchase of necessary office furniture. That the printing and mailing of the Journal be let by the Trustees on yearly contract conforming to required specifications.

Seventh. That any advertising contract now held by Dr. Dorr which the Society desires to carry be purchased, paying therefore 100 per cent of all moneys received therefrom for the first year. Payment to be made semi-annually and that this be considered as full compensation to Dr. Dorr for any rights which he may have.

Eighth. That the advertising policy be that of the Journal of the A. M. A.

Ninth. Stricken.

Tenth. That the Committee on Publication shall have oversight of the publication of the Journal, subject to the order of the House of Delegates and shall fill vacancies as they occur. That the Trustees shall audit the books of the Editor and authorize any contract which may be necessary.

Eleventh. That the Committee on Publication together with the Editor shall have editorial control of the Journal, shall provide for and superintend the publication and distribution of all proceedings, transactions, and memoirs of the Society.

Twelfth. All reports on scientific subjects and all scientific discussions and papers heard before the Society shall be referred to the Journal for publication. The Editor with the consent of the majority of the Committee on Publication may curtail or abstract papers not considered suitable for publication.

Thirteenth. All moneys received by the Editor shall be turned over to the Treasurer at the end of each month.

Dr. Saunders offered the following resolution; and moved its adoption:

“RESOLVED: That the special committee be continued and two more members of the House of Delegates added thereto, and that they continue their investigations and report at the annual meeting in 1912.”

The motion was duly seconded, submitted, and declared lost.

Upon motion, duly seconded, D. S. Fairchild was elected Editor of the Journal by a viva voce vote.

The house of Delegates thereupon adjourned to Friday, May 19, at 8:00 a. m.

V. L. Treyner, Secretary.

MINUTES OF PROCEEDINGS OF HOUSE OF DELEGATES, FRIDAY, MAY 9, 1911, 8:00 A. M.

President Voldeng presiding.

The roll was called by the Secretary.

The committee on Nominations presented its report, which was upon motion received, and was as follows:

Dr. C. B. Taylor, on behalf of Dr. L. W. Dean, withdrew the name of the latter from consideration for the presidency.

A ballot was then taken for President, which resulted in the election of Dr. L. W. Littig, and he was declared the duly elected President for the ensuing year.

Dr. Crawford moved that the rule be suspended, and that the Secretary cast the unanimous ballot of the House of Delegates for the remaining officers as named by the committee. The motion upon submission was declared lost.

Upon motion of Dr. Leipziger, the rules were suspended and the Secretary cast the unanimous ballot of the House of Delegates for H. A. Leipziger for First Vice-President.

Dr. Taylor moved that the rules be suspended and that the Secretary cast the unanimous ballot of the House of Delegates for the remaining officers named by the committee. The motion upon submission was declared lost.

Upon motion, the rules were suspended and the Secretary cast the unanimous ballot of the House of Delegates for Van Buren Knott for Second Vice-President.

Upon motion of Dr. Osborn, the rules were suspended and the Secretary cast the unanimous vote of the House of Delegates for T. E. Powers to succeed himself, and for Granville N. Ryan to fill the vacancy on the Board of Trustees.

Upon motion of Dr. Osborn, the rules were suspended and the Secretary instructed to cast the unanimous vote of the House of the remaining officers and committees to be elected at this time. The vote was so cast and the various persons named by the report of the committee were declared duly elected for the ensuing year.

Upon motion of Dr. Osborn, Burlington was selected as the next place of meeting, beginning the second Wednesday in May, 1912.

J. F. H. Sugg, chairman of the Finance Committee, presented the following report:

"We have examined each of the claims presented for consideration, and have found them, so far as we were able to ascertain, correct, and have approved them all.

This committee would make this suggestion: It is the practice of most of those who present claims to the Society to itemize their accounts. This places the matter in a business form, by which the Finance Committee can judge very closely the accuracy, justice and legitimacy of the claim. Some of them are put in lump, which we have to consider in good faith, but we make the suggestion that hereafter all bills be presented for consideration to the Finance Committee in itemized form. It is but little task for the man putting in his bill to put in the dates, the amounts, and what they are for.

We believe that the Committee on Legislation should O. K. the bill to the Finance Committee, and then the Finance Committee will have their authority for its action and it could be O. K.'d to the Society.

With these suggestions we submit the report.

Upon motion, the report of the Finance Committee was accepted.

V. L. Treynor moved that an appropriation be made to defray the expenses of the local committee of arrangements; the same to

be approved by the chairman of the Committee on Arrangements. Carried.

Upon motion, the House of Delegates adjourned *sine die*.

The Committee on Nomination submitted the following report:

President—L. W. Littig, Davenport; F. G. Murphy, Mason City; L. W. Dean, Iowa City.

First Vice President—H. A. Leipziger, Burlington.

Second Vice President—Van Buren Knott, Sioux City.

Treasurer—W. B. Small, Waterloo.

Delegates to A. M. A.—Max Witte, Clarinda. First Alternate—Edwin Hornibrook, Cherokee. Second Alternate—F. E. V. Shore, Des Moines.

Medico-legal Committee—A. L. Wright, to succeed himself.

Finance Committee—J. F. H. Sugg, Clinton; E. E. Munger, Spencer; A. J. Burge, Iowa City.

Committee on Public Policy and Legislation—Ward Woodridge, Central City; F. C. Mehler, New London; Thos. F. Duhigg, Des Moines.

Committee on Constitution and By Laws—D. C. Brockman, Ottumwa; E. Hornibrook, Cherokee; Lewis Schooler, Des Moines.

Committee on Publication—D. C. Brockman, C. A. Boice.

Councilors, 3d District—E. E. Dunkelberg, Waterloo; 10th District—M. J. Kenefick, Algona; 2nd District—L. W. Dean, Iowa City.

Trustee—T. E. Powers, Clarinda, to succeed himself; G. N. Ryan, to fill Dr. Cottam's vacancy.

Burlington was suggested as to the next place of meeting.

DIRECTORY FOR DISTRICT SOCIETIES.

The Association wants to receive programs, reports and other data from the Secretaries of the District and County Societies. It is planned to make this department of value to the component societies. In case of deaths among the membership, send in an appropriate biography for publication in the next issue. Address the Associate Editor at Washington.

Southeastern District Society meets in Washington November 16, 1911. C. A. Boice, President; E. Frank LaForce, Secretary, Burlington.

Second District Society meets second Tuesday in October in Davenport. D. N. Loose, President; J. V. Littig, Secretary, Davenport.

Iowa Union Medical Society meets second Tuesday in July and December. Next meeting in Cedar Rapids, July 11, 1911. C. W. Baker, President; F. G. Murray, Secretary, Cedar Rapids.

Des Moines Valley Medical Society meets in Ottumwa the third Thursday in June. A. O. Williams, President; F. W. Bowles, Secretary, Ottumwa.

Austin-Flint Cedar Valley Medical Society, next meeting in Clear Lake July 11-12. Paul E. Gardner, President; C. F. Osborne, Secretary, Waverly.

Northern Iowa Medical Society meets third Thursday of April and October. L. H. Jones, President; G. W. Murphy, Secretary, Danbury.

Southwest Iowa Medical Society meets first week in October in Osceola. F. C. McClure, President; Enos Mitchell, Secretary, Osceola.

SOME POSSIBILITIES OF ORGANIZATION.

The main reason for the existence of medical organizations is for the scientific advancement of the profession: but there are other and important duties and privileges. Practically all advancement in sanitary and public health measures is the result of the efforts of those who are active in medical work. Each city or county society should and can be an active element in the community. If the physicians are harmonious, well organized, active, they can accomplish much: professional standing will be higher: living will be more satisfactory: progress will be certain. There are some county societies which devote all their time to the scientific features, others combine social or public work. Still some do considerable work which can only be accomplished by united effort.

One way to rid the state of charlatanism is to enact laws against it or at least prevent the irregulars getting such legislation as will make their way easier. Unless those who know, do something, you may be sure that the quacks will get just what they want.

Some four years ago, when the Osteopaths asked the Legislature for a separate Board of Registration, the request was defeated by the physicians. One county society sent in a petition signed by every physician in the county. This was the first petition sent in and I have been told by those who knew that it resulted in the death of the Osteopath Bill.

Repeatedly have I been told by members of the Legislature that if the physicians would get together and stay there they would get about what they wanted. You may rest assured that the other side is on hands all the time, and stays put.

It is the hope that this feature of medical organization will receive more systematic attention than it has in the past.

Two years ago, the Legislature passed a law at the instigation of Dr. Munger, enabling counties to levy a tax, to erect public general hospitals. There are many counties in the state where this law can be made applicable.

Last fall, some seven or eight counties complied with the red tape necessary and brought the question before the voters at the November election. Every county failed excepting one-Washington. I am not competent to decide why the failures, occurred but I do know why and how Washington County succeeded. The County Medical Society had charge of the campaign, as it was, the only county wide organization. Every physician in the county signed a petition which was distributed by the thousands over the county. When the votes were counted, it was found that the election was successful in eighteen of the twenty-three voting precincts, with a majority of 784. The success of the campaign was entirely due to the work of the physicians; without them, it would not have

been brought to a vote, and then if they had not been active, the question would have lost out at election.

This spring, the Jefferson County Society followed the same procedure and was also successful by a handsome majority.

These two hospitals—the first ones to be established in the state as distinctly county hospitals are entirely due to the active work done by the county societies in the respective counties. It seems to me that if other counties contemplate bringing this question to a vote, the physicians must first be lined up. Otherwise the effort will be useless.

The physicians have potential powers which are not appreciated. I do not favor the political doctor who seeks for office or preferment for his own special good, but I do favor the organized profession making itself felt when opportunity offers, and taking an active part in public work.

The State Board of Health and Medical Examiners should be composed of the leaders in the ranks of the profession, and should work with and for the best in medical thought. There has never been that unity of action between the Boards and the general profession which should obtain.

Members of the State Board should be appointed from selections from the membership of the State Society, instead of being as now appointed by political preferment.

Maybe this is not probable nor possible in Iowa, and again, maybe it is.

It will never be that physicians constitute any considerable number of the legislators, but a well organized and harmonious county and state society will accomplish much. The time is at hand when physicians must take an active part in political affairs. The recent disgraceful and insulting legislation which has been attempted in the various legislatures this past year will only repeat itself many fold if we mildly acquiesce. Bills to regulate the surgical fees which may be charged to provide for the appointment of a board to give or refuse consent for operative work, to prevent fee bills, to prevent vivisection, etc., etc., have been introduced. Of course, these things are all based on prejudice and manufactured evidence, but some of them will pass unless proper action is taken.

Fee splitting is not so common as some would have us believe, but it should be rooted out. The profession as a whole is disgraced by the actions of the few, and the few should be shown up effectively for the benefit of the many. The profession has done great things for the public in the matter of quarantine and health laws, but the action has not been reciprocated. We must also be alive to our own interests.

Would that the medical profession could devote all its time and energies to the pure medical attainments, but the millenium is not here. The by-products are important, and if not cared for, the other may be rendered of no avail. Charlatanism is not subsiding, quacks are always active, irregulars of every description swarm around the legislatures asking for favors, and they will get them unless the reputable profession shows its hand.

What are you going to do about it?

DIRECTORY OF COUNTY SOCIETIES.

Please report all corrections to the Associate Editor.

- Allamakee**—David Strock, President; J. C. Crawford, Secretary, Waukon.
- Adair**—Eugene Tinsman, President; J. H. Harper, Secretary, Greenfield. Meets in December and June in Greenfield.
- Appanoose**—J. A. Replogle, President; F. W. Sturdivant, Secretary, Centerville. Meets quarterly.
- Benton**—J. P. Whitney, President; J. E. Luckey, Secretary, Vinton. Meets first Tuesday in May and October.
- Boone**—J. C. Walker, President; N. M. Whitehill, Secretary, Boone.
- Buena Vista**—O. Oberg, President; R. V. Graves, Secretary, Storm Lake.
- Carroll**—C. F. Hart, President; H. R. Pascoe, Secretary, Carroll. Meets at call in Carroll.
- Clinton**—Frank M. Keefe, President; Cecil W. Brown, Secretary, Clinton. Meets first Tuesday in January, April, July and October in Clinton.
- Cass**—T. R. Morris, President; Max Emmert, Secretary, Atlantic. Meets annually in Atlantic.
- Calhoun**—S. J. Farlow, President; F. V. Hibbs, Secretary, Lohrville. Meets second Thursday of March, June, September and October.
- Clay**—A. S. Chatterton, President; O. P. Ulrick, Secretary, Greenville.
- Chickasaw**—O. M. Landon, President; Paul E. Gardner, Secretary, New Hampton. Meets first Monday in June and November in Hampton.
- Cherokee**—P. B. Cleaves, President; J. H. Burlingame, Secretary, Cherokee.
- Decatur**—Charles Lovett, President; C. H. Mitchell, Secretary, Leon. Meets in Leon in September.
- Delaware**—M. F. Dittmar, President; E. J. Wittenburg, Secretary, Delhi. Meets second Tuesday in March, June, September and December in Manchester.
- Des Moines**—J. N. Patterson, President; E. F. LaForce, Secretary, Burlington. Meets second Wednesday of the month in Burlington.
- Dallas-Guthrie**—W. L. Thompson, President; Allen Moorman, Secretary, Redfield. Meets in Adel in January and July, in Panora in April and October.
- Davis**—E. D. Beauchamp, President; H. C. Young, Secretary, Bloomfield. Meets quarterly in Bloomfield.
- Dickenson**—Morris Bachman, President; C. S. Shultz, Secretary, Spirit Lake. Meets monthly in Spirit Lake.
- Dubuque**—E. R. Lewis, President; M. J. Moes, Secretary, Dubuque. Meets second Tuesday of each month in Dubuque.
- Franklin**—J. H. Hutchins, President; E. V. St. Clair, Secretary, Hampton. Meets monthly during the summer in Hampton.
- Greene**—F. M. Dean, President; G. W. Kester, Secretary, Grand Junction. Meets semi-annually in Jefferson.

- Howard**—H. W. Plummer, President; W. C. Hess, Secretary, Cresco.
Meets second week in July in Cresco.
- Hardin**—C. C. Gethman, President; W. H. Marsh, Secretary, Eldora. Meets
first Wednesday in July and January in Eldora.
- Henry**—E. W. Harrison, President; M. G. Danskin, Secretary, Mt. Pleasant.
Meets second Thursday in September in Mt. Pleasant.
- Ida**—M. R. Katherman, President; G. C. Moorhead, Secretary, Ida Grove.
- Jackson**—J. O. Ristine, President; Rose Lowder, Secretary, Maquoketa.
Next meeting July 25 in Maquoketa.
- Jasper**—James F. Hill, President; Charles E. Boyd, Secretary, Newton.
Meets biennially in Newton or Colfax.
- Jefferson**—M. C. Carpenter, President; J. S. Gaumer, Secretary, Fairfield.
Meets quarterly in Fairfield.
- Keokuk**—Alvah Negus, President; J. A. Dulin, Secretary, Sigourney.
Meets in Sigourney July 26.
- Lee**—C. R. Armentrout, President; E. G. Wollenweber, Secretary, Keokuk.
Meets semi-annually in Keokuk and Fort Madison.
- Lucas**—D. Q. Storie, President; A. L. Yocum, Secretary, Chariton. Meets
at the call of the President at the office of one of the members.
- Lyons**—R. B. Raleigh, President; J. F. North, Secretary, Rock Rapids.
- Marshall**—G. M. Johnson, President; F. P. Leirle, Secretary, Marshall-
town. Meets in Marshalltown the first Wednesday of each
month.
- Monroe**—C. R. Powell, President; T. J. Williams, Secretary, Hiteman.
Meets third Thursday of the month at Albia.
- Muscatine**—E. H. King, President; H. L. Husted, Secretary, Muscatine.
Meets monthly in Muscatine.
- Montgomery**—W. S. Reilley, President; Velura E. Powell, Secretary, Red
Oak. Meets in June and December in Red Oak.
- Marion**—C. E. James, President; C. W. Cornell, Secretary, Knoxville.
Meets annually in Knoxville.
- Mills**—E. A. Merritt, President; J. M. Donelson, Secretary, Glenwood.
Meets semi-annually.
- Monona**—J. H. Holt, President; F. S. Spearman, Secretary, Whiting.
- Mahaska**—L. C. Howe, President; M. Childress, Secretary, Oskaloosa.
Meets 15th of January, April and October in Oskaloosa.
- Osceola**—D. G. Lass, President; F. J. Langenhorst, Secretary, Ashton.
- O'Brien**—Milo Avery, President; W. C. Hand, Secretary, Hartley. Meets
annually.
- Plymouth**—W. T. Shephard, President; F. S. Clark, Secretary, Le Mars.
Meets quarterly in Le Mars.
- Pocohontas**—B. A. Smillie, President; J. C. Roirden, Secretary, Pocohon-
tas. Meets quarterly at Pocohontas.
- Ringgold**—E. J. Watson, President; Samuel Bailey, Secretary, Mt. Ayr.
Meets last Thursday of January, April, July and October in Mt.
Ayr.
- Story**—F. H. Connor, President; H. D. Chamberlain, Secretary, Nevada.
Meets first Wednesday in every month at Nevada or Ames, al-
ternately.

- Sac**—J. C. Iverson, President; F. H. McCray, Secretary, Schaller. Meets quarterly in Sac City.
- Sioux**—C. DeLong, Secretary, Orange City.
- Scott**—A. N. Elmer, President; J. V. Littig, Secretary, Davenport. Meets the first Tuesday of the month in Davenport.
- Taylor**—H. F. Dunlavy, President; C. M. Paschal, Secretary, Bedford. Meets quarterly in Bedford.
- Van Buren**—E. W. Pahl, President; E. E. Sherman, Secretary, Keosauqua. Meets bi-monthly in Keosauqua.
- Wright**—F. A. Stevens, President; H. F. Meyer, Secretary, Belmond. Meets in September in Eagle Grove.
- Warren**—O. P. Judkins, President; Edward L. Baker, Secretary, Indianola. Meets March, June, September and January in Indianola.
- Wapello**—W. C. Newell, President; J. F. Herrick, Secretary, Ottumwa. Meets first and third Tuesdays in Ottumwa.
- Winnebago**—H. E. Thompson, President; H. E. Eiel, Secretary, Buffalo Center.
- Washington**—J. H. Hull, President; G. W. Hay, Secretary, Washington. Meets semi-annually in Washington.
- Worth**—L. G. Hewitt, President; E. H. Dwelle, Secretary, Northwood.
- Wayne**—H. A. Habenicht, President; W. G. Walker, Secretary, Corydon. Next meeting November 9 in Corydon.
- Winneshiek**—F. A. Hennessey, President; H. B. Amy, Secretary, Decorah. Meets in Decorah in July and April.
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Dr. A. Jacobi, of New York, was elected President of the A. M. A. at the recent Los Angres meeting. No more worthy member could have been found. Dr. Jacobi has spent a long life in the ranks of the profession; he will honor the President's office. The next meeting of the Association will be in Atlantic City.

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D. S. FAIRCHILD, M. D. Clinton
EDITOR

C. A. BOICE, M. D. Washington
ASSOCIATE EDITOR

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Section of Preventive Medicine

ADDRESS OF CHAIRMAN.

G. E. DECKER, M. D., Davenport, Iowa.

Preventive medicine made a noteworthy advance during the past year when anterior polio-myelitis was definitely placed among the infectious and communicable diseases. Epidemics, increasing in number and magnitude, left little doubt as to the nature of the disease, but Landsteiner, Flexner, and others by means of inoculation experiments upon monkeys proved that it was caused by a living micro-organism. And though this micro-organism has not yet been seen it has been isolated in the laboratory from nasal secretions of infected persons and has been transmitted to monkeys through various mucous membranes as well as by intracranial inoculation.

Careful studies of the epidemiological features of the disease have lately given it an entirely new aspect. Whereas formerly the diagnosis was based upon the paralysis of one or more muscle groups it is now known that from 50 per cent. to 80 per cent. of all cases terminate in recovery without paralysis while a considerable number suffer a paralysis so slight and evanescent as to be overlooked. In short the paralysis serves only to measure the severity of the disease and cannot be used as a diagnostic point any more than a post diphtheritic paralysis can be used to establish the diagnosis of diphtheria.

Until this fact is thoroughly understood and accepted by the profession and the little progress can be made in the control of polio-myelitis for the mild cases may be the means of transmitting the disease in a severe form to the next individual.

Flexner and Clark of the Rockefeller Institute and Anderson and Frost in the Hygienic Laboratory have shown that the blood serum of a recovered case of polio-myelitis mixed in vitro with active virus will neutralize the virus and will thus protect monkeys inoculated with mixed virus and immune serum. Serum from an individual who has not had polio-myelitis does not neutralize the

virus. By this method many mild cases without paralysis have been shown to be true polio-myelitis. Among them are several individuals from Mason City, Ia., investigated by Anderson and Frost and two children of the writer's own family investigated by Flexner. It has also been shown that the infecting agent may persist in the nasal secretions for some weeks after recovery of the patient and thus be carried about and it seems likely also that there are healthy carriers who may spread the disease while they themselves remain well. There have been 662 reported cases of polio-myelitis in Iowa during the 12 months ending March 31, 1911, and 163 deaths. It seems certain that the majority of cases still escape recognition and so the mortality necessarily appears much higher than it really is.

The recognition in the last few years of healthy carriers of diphtheria, pneumonia and typhoid has served to awaken the suspicion among sanitarians that many of our restrictive regulations have been less valuable than was formerly supposed. When the mosquito theory of yellow fever was established it was clear that millions of dollars had been wasted upon quarantine and disinfection. Likewise the rat and flea theory of plague distribution has shown that little importance can be attached to infection through air or fomites.

The mosquito again upsets our old theories of miasmas and air infection in malaria and even sewer gas is no longer feared as it once was.

Air infection of wounds is now disregarded by practically all surgeons and we no longer hear of the contagion of the vapor circle in the acute infections.

Gradually it is becoming apparent that the danger of contagion lies mostly in the direct contact between the infected and the well and that fomites and air infection have but little to do with the spread of disease. When this shall be demonstrated with reasonable certainty it will necessitate very material changes in the rules governing quarantine and disinfection of contagious diseases. Indeed disinfection is frequently done so carelessly that we must conclude that some other factor is limiting the spread of disease and the so called disinfection has nothing to do with it.

All the pathogenic germs with the exception of tetanus and anthrax die rapidly when they are thrown out of the body and are exposed to light and drying. Hence some of the most careful sanitarians are depending less and less upon rigorous quarantine and terminal disinfection and more upon mere isolation of the patient. So long as the infected person is kept from associating closely with his fellows the disease in question is not likely to be spread.

It is found that the less rigorous and oppressive the health regulations, the more readily the public are to allow cases of infection to be reported. There would seem to be little reason for preventing adults from going in and out of premises placarded for scarlet fever and diphtheria unless perchance their occupations involved close association with children. Minnesota's rule regarding small-pox is rational in that it allows full liberty to all vaccinated persons and merely keeps the small pox patient upon his own premises.

The rules relating to the transportation of the dead which are uniform throughout the United States are unduly rigorous in many respects.

It would seem in the light of present scientific knowledge that a body embalmed with a solution of formaldehyde sufficiently to prevent decomposition must be safe and harmless no matter what disease caused death. Certainly an embalmed body in a casket is less a menace to public health than an individual who has survived and may still be a carrier of the specific germ of his disease. And yet certain bodies are not allowed to be transported or even to be disinterred.

There are still many clouds of ancient superstition to be cleared away before sanitary science and health regulations suit both the medical profession who make the rules and the people who are expected to submit to them.

TOBACCO,—ITS EFFECTS.

SAMUEL BAILEY, M. D., Mt. Airy, Iowa.

Mr. President, Mr. Chairman, Ladies and Gentlemen:—The subject of my paper is, "Tobacco; Its Effects." It is needless and unnecessary for me at this time and place to give a physical description of tobacco; it is so well known that scarcely a man, woman or child has failed to become acquainted with it in most all of its forms. However I will give the chemical or elementary composition of this strange plant as shown by scientific analysis. It contains large amounts of salts, consisting of sulphates, nitrates, chlorides, phosphates and malates of potassium, calcium, ammonia and nicotine, and a large per cent. of ash. The other constituents are albumin, resin, extractive, gum and citric acid. This is really a very remarkable combination, nicotine being the all important or poisonous principle of tobacco. The poisonous properties of the same are well known, and the action of it when given to the lower animal is also well known.

That tobacco is a poison, a narcotic, there is no question. I claim that the use of tobacco in any form, whether chewing, smoking or

*Read in the Session of Preventive Medicine at the Sixtieth Session, Iowa State Medical Society, May, 1911.

snuffing will so effect the whole nervous system as to produce in the user of the same an impairment, stunting, blunting or loss of moral tone or self respect. This may sound strange and radical to many, but facts are facts and they are stubborn things. I feel satisfied I can sustain these statements regarding the effects of tobacco by proofs too strong to be successfully contradicted.

All diseases of whatever character, whether of the nervous, digestive or urinary system, circulatory apparatus, or any other specific system, general or local, have fixed symptoms that point to disease that can be recognized if our perception is accurate enough, and our diagnostic ability equal as good. This is well known, especially to physicians, and it is also apparent to the professional mind that the great study, the real master study is diagnosis. Science has stepped in and made diagnosis comparatively easy as compared with methods in days gone by, and yet the great inquiry of medical man of today is, "What's the matter?" It would seem that the resources of mankind have been well nigh exhausted in effort to properly diagnose disease, and this may be said to be particularly true of diseases of the nervous system. I am dealing with a disease or rather disease of the nervous system produced by the use of tobacco. It is easy to find symptoms showing the effects of tobacco, and they are always bad. The first noticable or most common one is the effect on the heart,—“tobacco heart” so called, also on the optic nerve,—impairment of vision; on the throat, voice and bronchial tubes, mucus disturbances in the throat, huskiness or uncertainty of the voice, and various degrees of cough. And further, we find disturbance of the digestive function, ranging from slight gastric irritation to pronounced impairment of digestion, such as nausea, perversion of appetite, likes and dislikes of various kinds of food not known before using tobacco. I presume that of all of the above enumerated forms of disease, the heart trouble or irritation is perhaps the worst form, and is the one effect of tobacco that is most often diagnosed and treated. And while the user of tobacco may be affected with one or all of these diseases, there is continually present in his constitutional make-up a poisoned condition of the whole nervous system, that is shown by an unmistakable line or set of symptoms as is that of tobacco heart or any other disease, and is just as surely a disease as can possibly be diagnosed by symptoms. This disease, as has already been mentioned, is the impairment, stunting, blunting or loss of moral tone,—“tobaccoism.”

What are the symptoms? First, indifference to the rights of others. Men will actually smoke, chew and spit in public and in private, on the street, side-walk, in hall, home, church or theatre, without once considering for a moment the rights of anyone, or the feelings of those who would naturally be annoyed, sickened, disgusted with such things. Then again, persons who use tobacco

have no regard for moral or social law or customs. They observe only the civil or statutory laws. This is shown by the frequent placards placed here and there,—Tobacco Using Prohibited,” also “No Spitting Here,” and all such signs, if the moral tone of tobacco users were not impaired such reminders would not be necessary; they are not placed there for non-tobacco users to read.

Again, to prove that the moral tone of tobacco users is impaired, look at the floors of public buildings, such as court houses, public halls hotels, legislative halls,—national and state, and all national, state, county, city and town offices, and you will find them literally covered with cuspidors that men may have a receptacle in which to spit, and the inference is, and the facts are that if these spittoons were not provided for tobacco users, they would spit on the floor or carpets. These are facts, doubtless symptoms, that everybody is familiar with, and I ask you does it not show a diseased or impaired moral tone? I claim it does, and further it proves there is a disease,—tobaccoism, that brings such results. No other disease of which I know, or have ever heard, will produce such symptoms.

Again, a man,—a criminal, is sent to prison for the commission of a crime, murder, burglary, or any of the higher crimes, and we allow he is a tobacco user. He goes from a county jail and court house that reeks with the fumes of tobacco. When he lands in prison he is allowed so much food and water per diem, and has also an allowance of tobacco, and so is every criminal in our penitentiaries, if he desires it, given a certain allowance of tobacco daily. Now, does the use of tobacco by this criminal in his cell have a tendency to impair or improve his moral tone?

Again, the impairment or loss of moral tone is shown by the facts and conditions that make necessary the wonted expenditure of public funds as witness,—the outlay of money for tobacco alone for our penitentiaries, asylums, jails and poor houses in Iowa, amounts to ten thousand dollars annually, and along with this note the expense incurred in building smoking or cloak rooms in our legislative halls, and the liberally supplying the same with ornamental, high priced cuspidors, to say nothing of the ninety-nine county court houses in this state furnished with spittoons. Here I want to cite in this connection a well marked evidence of stunted moral tone. It is this; there are few post offices in this state that do not have their tobacco stalls or stores, and this debase, indiscriminate practice is making the post offices of our nation places unfit for women or children to enter, and if necessity drives them there they are nauseated or sickened by tobacco fumes. I ask in all my fairness,—is this not another symptom, impelled by sentiment, pointing to a diseased, impaired moral tone?

Again, witness the condition of our students in our universities, colleges and schools. It has become almost an open

fight to keep the public, unreserved use of tobacco out of these institutions. It is a startling fact that our young men in school and out have become a vast army of tobacco users, either chewing, smoking cigars, pipes or cigarettes. And here let me add, no country on earth, Turkey alone excepted, has run riot with the tobacco habit to equal the United States in recent years.

Again, select twenty-five young men abstainers from tobacco, and another twenty-five young men users of tobacco; let all things be equal, place them before a keen observer for inspection, and he will readily see that the moral tone of the non-tobacco users is far above that of the users of tobacco. He need mention only the gallantry of movement, the gentleness of heart, the chivalry of manner, the alertness of mind, the self respect exemplified in daily life to show you the extreme difference in the moral tone of the one who abstains and the one who indulges in the use of tobacco.

Again, how about the moral tone of females who use tobacco? Is their moral tone impaired or blunted? Is their self-respect stunted? There would be little question about the impairment, stunting, blunting and loss of moral tone and self respect if the proof of such conditions was confined alone to the use of tobacco by women. We all know and freely admit that the use of tobacco by women is simply abominable and awful. And yet, we that believe in a single standard of morals contend that what will produce certain conditions in one case, will bring about a corresponding result in another case.

Again, I am reliably informed that when human females, known in their low estate as prostitutes, have descended to the lowest grade in their disreputable business, and wish to descend to the unfathomable depths of moral depravity still lower, invariably they are tobacco fiends. Some political economists tell us that their awful lives and consequent crimes drive them to the use of tobacco, but is it not reasonable to conclude that the use of tobacco helped to drive them backward and downward to the final depths?

I have heard much and have seen something of what is so often alluded to by tobacco users as the "good old grandmother" of days long since gone by, who was accustomed to smoking her pipe of tobacco regularly and at the same time was an emblem of innocence and purity. Admitted; I have seen such. I have also heard and seen something of the good, honest old "Country Squire" of days long past, who used to sip or drink his "toddy" daily and never got out of the way nor became intoxicated; but I will tell you that this goodly and Godly old grandmother, and this staid, sturdy and honest old squire have passed and gone forever, and they have no longer a place in our twentieth century civilization any more than that in the agricultural or industrial world the swinging

cradle should be used to reap grain, or the spinning wheel to weave cloth. We are living in a rapid age, and the customs and habits that prevailed in olden times will not meet present conditions, and this is especially true regarding the use of tobacco and liquors. I have often wondered whether during the time when tobacco and whiskey were in common and universal use, if there were not injected into the human family, diseases and frailties that have now by the laws of nature and the laws of heredity become curses and blights in our physical make-up afflicting thousands and tens of thousands with tobaccoism and alcoholism.

I am firmly of the opinion from close observance that tobacco users are less courteous to and considerate of the opposite sex. That is that keen discernment and sensibility that prompts to courtesy, recognizing the rights and liberties of women is blunted or entirely lost, and to prove this investigate the social conditions of peoples or nations where the user of tobacco is enormous. The social conditions of the Turkish women is not an enviable one, neither is that of the Spanish women, nor among another race of people where men are excessive users of tobacco.

I do not claim that users of tobacco are all noticable or marked cases of moral perversion, nor do I claim that all tobacco users have the disease,—tobaccoism, in a marked degree, but I do claim that the vast majority of those that use tobacco are so diseased by its use that their moral tone is impaired just as far and as deeply as his symptoms show. I do further claim that the moderate users of tobacco have lost some moral tone, for they cannot see the loss of moral tone in excessive users of tobacco. Who ever heard of the moderate user of tobacco condemning the man that smokes, chews and spits to the annoyance of hundreds?

The disease,—tobaccoism is extremely insidious and comes on unawares; it is present long before the afflicted has notice that his heart, his optic nerve or digestive organs are affected; that this positively must be true is shown by the fact that when the heart is affected by tobacco, it receives the poison from some other organ or specific system, which is usually the nervous system or the circulation. I repeat it, that long before these organs or any organ is affected to a noticable degree, the moral tone has had its poisoned effect, has had its impariment thru the use of tobacco and its effects on the nervous system and the brain. And these diseases of the nervous system and the brain are most difficult of diagnosis. This is especially true of diseases affecting the mind, the will, the moral tone, the self respect and other that could be named. And more especially of insanity, a disease it is true but frequently cannot be noticed and for years might pass undiagnosed. The person passes among his fellows as an eccentric character, and no one examines him closely, but some day the disease develops to

such a degree that anyone may detect it, and legal restraint becomes necessary.

Tobaccoism,—I repeat is an insidious disease and few notice it, because the symptoms are so common and so many are affected by it, but the manifestations of the trouble are so distinct that there is no need of mistaking this dreadful vampire that is sapping and undermining the health of the greatest people on earth,— our own American race.

The dangerous effects of the use of tobacco is now being recognized by some of the great corporations that employ men to occupy responsible positions, such as railroad engineers, flagmen, switchmen and block-signal men. These corporations have strict rules forbidding their men to use tobacco while on duty, and it is alleged by authorities that impairment of vision and indifference to responsibility, are among the reasons for such prohibitive rules regarding the use of tobacco.

I am not a pessimist nor am I disposed to be considered one, nor am I among that class of people that sing. "Tobacco is a nasty weed, And from the devil came its seed," neither am I ready to say that all the tobacco users are bad, but I do claim that there is a great danger, a flagrant evil, a real calamity confronting the coming generations if this question is not fairly dealt with and settled. The use of tobacco has made its mark on young men and old and at the present time it is invading the rank and file of the best manhood in the United States, and it will grow worse and worse. Really, the evil consequences of tobacco using are only beginning. What will the coming generations be, and what will they do if this awful cloud of impending danger is not vanished? There is no dodging or trying to evade the inevitable laws of nature, like begets like. If our race of people continue the process of being saturated with tobacco and tobaccoism, who can tell what coming generations will be like? One of the greatest alienists of this country says, "More or less moral anesthesia is frequently present in those addicted to the excessive use of narcotics. A man or woman chronically poisoned by narcotics is apt to have offspring more or less defective." One of the leading daily newspapers of the United States stated in an editorial on "Smoking in Public" among other things said, "There is no man quite so selfish as the man addicted to tobacco. He does not seem to realize or does he care what effect his smoking has on those about him, not so addicted." This is practically an admission on the part of some one that tobacco does something to people. This newspaper stated that he is selfish. I have said and will say again that it impairs, stunts, blunts and destroys the moral tone and self-respect. It does it because the man is diseased; he has tobaccoism and these are the symptoms. What is to be done? Who can do it, and when? There is a solution to this

great problem and one only, and that is the bringing about of a condition or state in which men will be taught to cease the use of tobacco. That is what is to be done. Then, who can do it? Why, the doctors and they only. No great reform, altruistic in character has ever been successfully carried out without the active co-operation of physicians. If every doctor in this great comomnwealth of ours would begin a crusade and institute a campaign of education against tobacco, would begin to teach the people and offer instructions showing them the great danger that follows the use of the pernicious weed, it would have a most wonderful effect. There are thousands of men, young and old, indulging today in its use who have not the slightest conception of the serious consequences to follow. They know nothing of the train of diseases and ills entailed by its use; have never had their attention called to the facts as we see them like mountains before us, and unfortunate, and sadly unfortunate it is that very many doctors are within its throes themselves, and this is a condition that should not be. But this being the case the first thing necessary to begin this crusade for the banishment of its use, and the wiping out of the disease, tobaccoism, is for the doctors themselves to set the example of being clean from its use, and if this mark of consistency is shown reform is sure to come with rapid strides, and allow me to again repeat, that no line of reform, altruistic in nature and for the general uplift of the human family, morally, mentally, socially or physically can be an ultimate success without the hearty co-operation of our profession as a whole, as is shown by the history of the past, and is equally true of the present and will be in the ages to come.

DISCUSSION

J. F. H. Sugg, Clinton: I have been a smoker for a good many years—sometimes a pretty hard smoker, but I never had any reason to fear the sheriff. I did not know that I was an extremely bad man; probably I am. I think the paper was a very good one, but the truth was carried too far, until it became nonsense. I do not believe that tobacco has an especially demoralizing influence upon the human organism. I do not believe that it has a tendency to make man immoral. I do believe that it has an injurious effect. I have myself stopped using tobacco a good many times, and I expect to again. When I get a little bothered about something I am an excessive smoker; I like twenty cigars a day when I get down to business. I have smoked that many for weeks or months, but I usually limit myself to six or eight or nine a day. I have kept house for over forty-five years, and I never had a cuspidor in my home. Whenever you see me spit you see the cigar go immediately, because it is not a good cigar. I smoke without spitting. I don't say anything about chewing, because I think that is a very filthy habit, but I deny that tobacco users are the only spitters in the world. I have seen ladies spit on the street, who I know were not addicted to the use of tobacco.

I am not here to defend tobacco. I don't know that it does the human race any good, but I know that it is a certain solace. I know that the smoker has largely displaced the drinking bout; that men meet and smoke a cigar or two or three apiece and go away satisfied, where in olden times they used to smoke and drink until some of them were

under the table. There are other evils in the world that are greater than tobacco. Last month was devoted to a crusade against tuberculosis, and now the gentleman would have me go home, throw away the cigar, and enter the field against tobacco. We mustn't crusade too much. A man should learn to control himself, and he who smokes three or four cigars a day gets a great deal of comfort out of it.

Speaking about the good old grandame and squire having passed away, never to be heard of again, is a delusion of old age. There are two things that I have resolved never to do, and one other that I intend to do. In the first place, when I get really old (which I expect to in years, but never in feeling), I am always going to keep myself respectably decent in personal appearance; and I will never have any tobacco juice running down my face or disgust others with my table manners, and I will never say how much better the young men were when I was a young man than they are now. Young men are just as good now as they ever were when I was a boy; old men are just as good now as they were when I was a baby—and generally better. Those old grandames that used to smoke, smoked a filthy, black, stinking clay pipe; you couldn't tell where the pipe and the teeth met; one was as black as the other.

I think that the paper on the whole was an extreme paper. It took up a subject that might have been handled to the advantage of the public and of the hearers and carried it far beyond reason and what I call ordinary common sense.

H. A. Leipziger, Burlington: This paper demonstrates once more the value of education. An hour or more ago we were all under the impression that the invitation by the local committee to attend a smoker here tonight was an expression of kindness on their part. Now we are led to believe by this frightful arraignment that we are asked to demonstrate a lowering of morals and exhibition of degenerated or diminished physical virility on the part of those who accept the invitation and attend the smoker. Now, if the participants were to be called upon to demonstrate the correctness or incorrectness of Dr. Bailey's excellent paper, the session at the smoker would probably outvote by a great majority the sentiments expressed in the doctor's essay.

I agree with the last speaker that the paper has taken rather an extreme view, and I must commend the essayist very highly for doing that. I believe if a reform of any kind is to be instrumental, that is the only way to get at it. Let the extreme points be finally eradicated by experience of future conduct; but in order to get at the thing that is wrong it is proper to take the most extreme view that is available and present it as hard as you can. For that reason I think the essay was an excellent one.

I believe it was Sir Walter Raleigh who brought tobacco into the civilized world. I don't believe the moral tone of the world has diminished since the sixteenth century, as compared with civilization previous to that. I don't believe, therefore, that the introduction of tobacco can be considered a great factor in the decrease physical or moral standards. Epidemics of physical ailments, immorality, sociological defects and ill actions were a great deal more prominent then than they have been in the centuries following. But I do think the point well taken that tobacco should be limited at least to those who are physically at par. I would suggest that instead of the ordinary funny stories that are told at the smoker, this matter be investigated.

V. L. Treynor, Council Bluffs: There is no question but what Dr. Bailey takes an extreme view of tobacco. I don't believe that just because a man smokes a cigarette or takes a chew of tobacco he is going to go home and beat his wife; but I do believe that tobacco is harmful under certain conditions; with certain people. I tell my boys that I don't want them to use tobacco until they have developed into manhood, and I am going to keep them from it if I can by moral suasion. I don't tell them that they can't smoke; I tell them that if they want to be athletes they mustn't smoke; that they must choose one or the other; and so far they haven't smoked. But I tell them that if they feel that they must smoke, to come right out like men and smoke, and I make my wife mad every time I tell them that; but I believe it is the proper thing to do. There is just enough of the kernel of truth in what Dr. Bailey said to hang

an argument on, but I believe he has grossly exaggerated the evil effect of tobacco. I know that there are men to whom tobacco is very harmful indeed physically; I know that to some men it has a sedative effect that is very beneficial; and I honestly believe that if I would quit tobacco my wife would get a divorce from me inside of thirty days.

E. E. Dunkelberg, Waterloo: I think it is perfectly capable of proof that the effect of tobacco upon the world has been to very materially improve the standing of woman. At the time of the discovery of tobacco there was not a country in the world in which woman was not practically a chattel of the man who married her. She didn't hold any property in her own right. If she saw fit to leave her husband's domicile, he would send the sheriff after her and bring her back home. If she didn't behave herself he would beat her, and it was considered perfectly proper in most countries for him to do it. With the same kind of argument that Bailey advances it is perfectly apparent that the use of tobacco has rendered the position of woman tolerable in the world, for only since the use of it, has she been treated with consideration.

So far as I am personally concerned, my folks didn't allow any tobacco when I was a boy, and they informed me, as Dr. Bailey did, that it was a nasty weed, and that men who used it couldn't succeed in the world, and that it would handicap every one who used it. But I saw my father, a man who never used tobacco in his life, hobnobbing and on very pleasant terms with the tobacco users of our neighborhood. I also saw those tobacco users very much better financially than my father succeeded; and I came to the conclusion that he was mistaken, and that tobacco was a real help in business affairs, and I proceeded very early to acquire the habit. I have been smoking all the way from ten to twenty cigars a day for twenty years. I am not proud of it, because I wish I had the money for it; but the sucker who hasn't smoked them can't show any more than I can. I recall the story of the preacher who came to visit his college chum. The latter had just finished smoking one cigar and was lighting another. Said the preacher: "John, how many cigars do you smoke a day?" "Five or six." "What do they cost you?" (So much.) "Do you know that you have smoked up that brick block over there?" "Yes, I suppose I have. Now I will ask you something. "Do you smoke?" "No," the preacher replied. "Where is your brick block?"

But seriously, though I know I smoke too much, and believe I would be better off if I didn't smoke, I believe there is something about us that demands the thing, although there may be exceptions. Bailey's voice isn't as good as mine, or as Bierring's. And honestly, if I have got to die five or ten years ahead of my time on account of smoking, I am willing to; it is worth the money. The five or ten years at the end of my life doesn't have a lot of attraction for me.

Dr. D. C. Brockman, Ottumwa: I never saw a better illustration of the truth of Dr. Bailey's statement than the remarks that have been made here, showing the lowered moral tone of the individuals who used tobacco. The very fact that my friend Dr. Sugg says that he smokes to excess, and he knows it, shows that his will power is effected by it. There is a side to this that is not extreme, either one way or the other. I once used tobacco to excess, I found it was hurting me, and stopped before my will power was entirely gone.

Over at Columbia University a year ago there was a commission of physicians appointed to see what the effect of tobacco was on the standing of the pupils of that university. This commission took a certain number of pupils from each class, with environments as nearly alike as possible, half of whom used tobacco and half not; and those who did not use tobacco had a standing between four and five per cent. better than those who did use tobacco. Why? You say this is a garbled report, because they were a lot of cranks. I will say, on the other hand, that the three physicians who composed this commission were all smokers.

We know very well that tobacco hurts young people a great deal worse than it does grown people. Let us physicians do our duty by the people. Let's prevent the boys from smoking just as long as we can. No doctor wants his boy to commence smoking early. Why? Because he will not be as good a boy; he will not be as bright or as strong mentally if he smokes early as he will if he does not. Then let us as far as possible teach the boys this great truth: that tobacco does more harm to all people, but that it does more harm to young people than it does to old.

L. W. Littig, Davenport: I passed the half century line before I even tried to smoke a cigar or a cigarette. Some few days ago a friend of mine said: "Doctor, are you smoking? I didn't know that you smoked." "Well," I said, "this is the result of a resolution made some fifteen or twenty years ago that I would not smoke until I reached the half-century mark." "For God's sake, Doctor," he replied, "what sort of a process of reasoning could a rational man go through to induce him to smoke after he reached the age of fifty?" "I will tell you," I answered. "My father lived to the age of eighty-four years, and during the last eight or ten years of his life we were all at a loss what to give him at Christmas time. I believe he would have enjoyed the last ten years of his life much more if he had some of the small vices, and if we could have presented him an occasional meerschaum pipe or a box of cigars that he could have smoked. That is the only reason I am smoking: for a little consolation and pastime in my old age."

I am perfectly willing that my boys should smoke after reaching the age of fifty, but don't believe a young man has any business to smoke or drink whiskey.

Ira K. Gardner, New Hampton: After I reached the age of fifty or fifty-three I found I was getting corpulent, and decided I would learn to smoke and reduce my corpulency; and I have been smoking now for about eight or nine years.

As regards to my moral tone, I have been a much better man since fifty-three than I was before. Seriously, I have read about all I could see in our best journals and text-books on this subject of reform, and it is about an even stand-off. When they get right down to the point, there doesn't seem to be any exact reason why a man should or should not smoke. Of course I am speaking about a moderate smoker. I am not like Dr. Sugg; fifteen or twenty day will do me. I find it a great solace; indeed, the last nine years of my life have been my happiest ones. Nothing can be more conducive to comfort than to have a man step into my office in the evening and have a smoke with me. We don't talk about our neighbors; we talk about things that are uplifting. I find that I have been better to my wife since I learned to smoke. I take her out to theatres; I even went to prayer-meeting with her a few nights ago. That is the result of smoking. It has not injured me, I know, morally or in any manner.

In regard to spitting, I hate to use that word. I am something like the Boston girl who had a Spitz dog; she said her dog was an expectorating dog. We have to have men talk like Dr. Bailey, and it is all right, perhaps, to hold us up somewhat; but I believe the position he takes is somewhat extreme. I believe no man should smoke until he is past the half-century mark, because it applies to me personally, and so it must be the right thing to do. There is a sociability about smoking that we can't get in any other way. As regards our being selfish, and all that sort of things, I don't think that applies at all.

Geo. F. Jenkins, Keokuk: I am pleased to hear the paper of my friend, Dr. Bailey. Of course I believe he is correct on one side. I happen to be one who has never used tobacco or stimulants of any kind, and yet I am not ready to say that the smoking of tobacco is always wrong. I know it does a great deal of harm, and I have seen benefit when its use was discontinued; but when you come to consider that it is almost universal for men to use some stimulant, I presume tobacco is about as simple a thing as can be used. I see my friends puffing away on cigars and seeming to be happy and enjoying themselves. I can sit and think, and probably may enjoy it, but I don't look as if I was enjoying myself like the man who smokes; and consequently I feel that they get as much out of it as they lose. They undoubtedly lose something in the way of health and strength, particularly it they go to using it too young; but when you come to take it as a whole, in this day and generation when they are running after recreation, I don't know that it would be right for the doctors to array themselves against the use of tobacco.

My Missouri friends chew. I think, as the Doctor has said, that it is a filthy habit; but I have seen some awfully good men chew, and I have seen some that lived a long time, and I would hardly be willing to say that they should quit. Yet I believe that chewing is worse for the digestive organs than smoking, and we have to look at it simply along

the line of what benefit there is from it, what good does it do the human race, how much enjoyment do they get out of it. If they get enjoyment out of it, I would not be altogether on the side of those who don't believe in the use of tobacco, although I never have used it and don't believe I could.

Dr. Bailey: (Closing), I have heard from my earliest childhood that it is a wounded bird that flutters. I want to ask all these gentlemen that criticise how long the principal of their high school would last if he taught the pupils to use tobacco? You would rise in an army and throw him out. There isn't a teacher in the state of Iowa in our universities or colleges, or high schools or common schools most remote, that thinks for a moment of teaching that the use of tobacco is half-way right. But they do say that is it absolutely wrong; that it is injurious in every respect, physically, morally and mentally. I have that much to back me up.

Of course I can't help but feel flattered at being discussed and cussed to this extent. In regard to one speaker who said that he was willing to give ten years of his life, if it killed him off that early, I think if he had said twenty everybody would have been just as well satisfied.

Dr. Jenkins is perfectly willing for the other fellow to use tobacco, because he thinks he has a good time. If ever a fellow had a good time without the use of tobacco. Dr. Jenkins is that man.

I probably am an extremist on these things, but it is an evil and an awful one. I would like to know what man there is here who would like to see his wife or his daughter using tobacco? She has just as much right as he to smoke or chew.

THE CARE OF CHILDREN IN PRIVATE INSTITUTIONS.

MURDOCH BANNISTER, M. D., Ottumwa, Iowa.

MEMBER OF BOARD OF CONTROL,

The subject of this paper was suggested to me in a letter by Dr. Decker, of the State Board of Health, intimating that steps be taken by the state to establish an institution for the care of friendless infants and friendless crippled children. The attention of the Board of Health had been called to the high and apparently unnecessary morality among babies cared for in private and semi-private institutions to which these unfortunates are now consigned. There is no state institution in Iowa whose province it is to care for deserted or motherless infants or crippled children. Occasionally, under some unusual circumstance an infant or a crippled child is taken into the Soldiers' Orphans' Home at Davenport, but those for whom the Home is designed are normal children over two years of age. Neglected crippled children and infants are cared for in this state in private institutions.

There are twenty-five of these institutions in Iowa which care for friendless children. Of this number twelve take care of babies, but of these none take babies only,—all take older children as well, some receive adults and nine also receive crippled children. Some

*Read in the Session of Preventive Medicine at the Sixtieth Session, Iowa State Medical Society, May, 1911.

are primary maternity homes and care for only such children as are born in the homes. Prominent among the homes are:

The Iowa Children's Home, Des Moines.

The Christian Home, Council Bluffs.

The Creche, Council Bluffs.

The Good Samaritan Home, Council Bluffs.

The American Home Finding Association, Ottumwa.

The Florence Crittenton Home, Sioux City.

St. Anthony's Home, Sioux City.

The Benedict Home, Fort Dodge.

There is a vast amount of capital invested in buildings and endowment for these homes and large sums of money are donated each year for their support. The aggregate real and personal property of seven of the above list which care largely for babies amounts to about half a million dollars, and they spent \$110,000.00 last year for maintenance. The total capital of the whole number is \$1,359,000.00. Their expenditures for 1909 aggregate \$277,000.00. Most of these organizations are conducted for the benefit of the inmates and do a vast amount of good work.

In February, 1911, a letter was addressed to the head of each institution in the state caring for children, requesting information as follows: the number cared for under one year of age, the average length of time the babies remained in the home, the number that were breast-fed during the first six months of life, the number that were bottle-fed, the weight of the breast-fed infants at the end of the six months and the weight of the bottle-fed infants, and the number of deaths during the first year of life. Suggestions were asked from each superintendent for the betterment of the service and the reduction of the morality. The replies showed widely differing methods and diverse results.

The records show that the deaths in one institution in 1909 amounted to 10 per cent. during the first month and seven days of residence in the home and to 17.5 per cent. during the first year of life. In the same institution the next year the deaths during an average residence of one month and five days amounted to 28 per cent. and during the first year 40 per cent. In this home there is no breast feeding. Various methods of artificial feeding are employed.

The records show that the deaths in another institution amount to one out of five or 20 per cent. during the first year of life. In this case 9-10 of the babies were bottle-fed and only 1-10 breast fed.

In a third institution 10 per cent. died during the first year of life. In this case 84 per cent. were bottle-fed and 16 per cent. were breast-fed.

In a fourth institution the morality was 17 per cent. In this case the mothers remained in the home three months on the average

and 30 per cent. of them nursed their babies.

In a fifth institution the morality was 10 per cent. Here about one-half of the mothers nursed their babies up to six months of age.

In a sixth institution where the conditions were reversed, seven-eighths of the infants being breast-fed for the first six months and only one-eighth bottle-fed, we find the remarkable record of only one death from sickness in 49 babies, or only 2.2 per cent. This one death was due to cholera infantum. The mothers remained in this home for six to seven months and 88 per cent. of them nursed their babies during this period. There were recorded in this home the deaths of three premature babies and two blue babies. If these were considered the total morality would be 12.8 per cent.

In the entire state of Iowa there were in 1910, 36,982 births. Of this army of recruits 3,068 died under one year of age—one in every 12, or 8 1-3 per cent. It is to be noted that the better class of these institutions show a death rate not far from the general average of the state.

The superintendents of the home all agree that suitably modified, clean, fresh cows' milk is better for infants than prepared foods. One of the superintendents, whose results are among the best, says that no two of the infants in her charge take exactly the same mixture. A careful study is made of the ability of each child as regards digestion, and the superintendent then prepares a mixture on which that particular child thrives best.

Another superintendent, whose results are given under No. 6, says that "Perfect cleanliness in every detail of work affecting the infants on the part of both mother and nursemaids is essential. Sterilize bottles and cooking utensils for bottle-fed infants each time after using. Keep nursery entirely free from flies."

Another says that "if the children were breast-fed for the first six months the morality would be reduced one-half. We have never lost a child over six months of age except one. Nearly all the deaths occur among infants under two months."

Another says, "I believe a larger number of mothers might have nursed their babies during the first six months. They should be encouraged—even required—to care for their infants, nursing them for several months at least." I think the figures above given will amply bear out this recommendation.

The average weights showed the breast-fed infants about two pounds heavier at six months than those fed artificially.

Several of the superintendents expressed the wish that each infant might have more individual attention. They complained of lack of nurses, one nurse frequently having eight to fifteen infants to care for, which overburdens the nurse and does not give the baby sufficient care. The babies do better after placed out, when they get more individual care and mothering.

All the homes for which the above vital statistics are given are managed as charitable institutions by boards of managers who supervise the institutions without pay. The superintendents and employes receive fixed salaries. There are two maternity homes doing a large business in the state which are managed by individuals and are apparently their private property. In one of these there have been 46 deaths of babies out of 238 births and in another 18 deaths out of 82 births. As these babies remain in the home only two or three weeks it will readily be seen that this is an enormous mortality, being on the average 20 per cent. for the first two weeks. While it is to be remembered that the parentage of these children is not the best, yet such records as these certainly show neglect and indifference. Some of the mothers of these children are probably diseased, at least that is the excuse given by the managers for this mortality, but the proportion of such diseased mothers can not account for this heavy mortality.

The business of conducting a maternity home does not properly belong in the list of occupations which should be undertaken for financial gain. Where gain is the object abuse of the helpless inmates is sure to occur. The state employs an officer, under the supervision of the Board of Control, whose duty it is to inspect all institutions which are in charge of an association or society having the custody of children. The statute does not provide for such inspection of enterprises run by individuals and it is here that the danger lies. Such enterprises should be especially watched by the Board of Health.

While there is room for improvement, yet the managers of the better class of institutions are aware of this and they are trying to correct the faults in their management as promptly as the means at their disposal will permit. It would not be advisable for the state to undertake this work, which is already so ably carried on and to which such a large amount has been donated by private charity. Public inspection should suffice, and if properly performed will help to maintain a high standard in the various children's homes of the state.

The figures above given prove without question the vast superiority of maternal nursing as compared with artificial feeding. In view of this fact it is your evident duty as physicians to advise the prospective mothers whom you send to these institutions to go with the intention of nursing their babies at least six months. This course will not only vastly increase the chances of the child as far as life and future strength are concerned, but it will develop the mother's character. If an unfortunate girl, having committed her first error, and after being cared for by charity during the time of her trial, is encouraged to smother her motherly instinct, and is allowed to go "scot free" within a short time of the birth

of her child she is very apt to fall into the same pitfall again. She should in all cases stay and assume the responsibility of her child for a time at least and her physician should advise her to do so.

The proper care of the crippled child is a problem not easy of solution. The little ones require expert surgical and medical attention, and this is not always easy to obtain.

The Christian Home at Council Bluffs cares for a number of these crippled children, so many in fact that they are considering the advisability of establishing an orthopedic department. This is an expensive charity and one which should properly be assumed by the state. If an institution for crippled children could be established near our State University the surgeons connected with the University could give their services without extra charge. Many a crippled child could be restored to a life of usefulness and many a one transformed into a helpful citizen who would otherwise become a charge on the state.

DISCUSSION

Max Witte, Clarinda: The one important fact which obtrudes itself upon our attention is that this is an age of enlightenment; it is an age of warfare against misinformation. Our troubles in the last instance all lead back to ignorance. It is the particular glory and achievement of our profession that we have instituted a campaign against this misinformation and this lack of knowledge.

The paper read by Dr. Bannister has been one of peculiar interest to me. Like yourselves, I perhaps have not been so much interested in babies generally as in my own and those of my neighbors, and in observing the things that could have been done better. As citizens, it is our duty to look out for these little ones—the citizens of tomorrow, on whom the hope of the commonwealth depends; and it has been one of my observations, and has undoubtedly come to you, that the things about a baby that the mother does not know are very numerous. She will rely, and the doctor will rely, and the neighbors will rely, upon the old lady—the good mother of the neighborhood; and you all perhaps remember the story of the old lady who bitterly resented the doctor's charges that she was not a proper person to take care of a sick baby. She said she had had seven of her own, and they all died.

It seems to me the thing to do for the future is to have a campaign inaugurated, preferably by the physicians, who will instruct people who are about to attain the parental stage about little folks that are to come into the world, and their proper care. We are taking care of those who are tubercular, and the public generally is becoming well informed as to the dangers by which they are surrounded, and which can be obviated and evaded. Campaigns against the black plague are being waged; and I think the next preventable trouble is that of infant mortality. The information should properly come from our ranks, and think the next generation will see a great advance in prevention in this particular direction.

The paper of Dr. Bannister shows beyond everything else that the mother should be the mother to the infant; that the infant should not depend upon the pseudo-mother and the pasture, or upon the manufacture of all sorts of baby foods in the manufacturing laboratory. I am afraid that the many mothers, at least, are not doing their duty by the infants; if they did it, the infant mortality would be materially lessened, not only in connection with these homes which were referred to, but in the country at large. I am aware that in certain circles it is not fashionable to have babies, and it is not fashionable to take care of babies after they come by accident. It is all wrong, and the information should come from us.

J. W. Cokenower, Des Moines: It seems to me that there has never been a time so ripe as the present for public action with regard to infant mortality and crippled children. I shall not attempt to speak of the etiology of any of the causes for the crippled children, because we recognize that anterior poliomyelitis and rickets, and in fact, all of the general diseases which bring about these deformities, are constitutional and have been well provided for; but I wish to say to the general practitioner that there is a mistaken idea with regard to the concluding treatment of all classes of diseases that may contribute to deformities. It seems to be the general idea that the only thing to do is to save their lives and get them over the acute part of the disease, and when that is accomplished that is the end of the medical man's work. That may be true in one sense of the word, but in another it isn't, because it is just the beginning of the end. If you have succeeded in saving the life of a child, and yet by little omissions or inattention have deprived that life of liberty, as it were, for the rest of the days, it seems to me that it is certainly a bad job. What is the use of permitting a child to walk when its limbs are not fit for it? It is true that the mother wants you to get the child to walking or using its limbs; that is one of the first things on which she appeals to you; and you grant her request by doing the very things that you ought not to do. This is demonstrated by the fact that you see more deformities in the lower limbs than in the arms. Why? Simply because they don't walk on their arms and they are at rest; they use their limbs before they should and hence the deformities. So that in all cases of rickets, anterior poliomyelitis, or any other disease that produces deformity as a concluding factor of the disease, the thing to do is to put the child in a recumbent position and protect its general health.

CLASSIFICATION OF NUTRITIONAL DISTURBANCES IN INFANTS, WITH THE GENERAL INDICATION FOR TREATMENT.

C. G. GRULEE, M. D., Chicago, Illinois.

In a general way, nutritional disturbances in infants may be divided into three distinct groups. The first of these is nutritional disturbances due to errors in diet; second, nutritional disturbances superimposed on inherited conditions, and, third, nutritional disturbances secondary to parental affections. The first group is the one which interests us here, but, in order to understand its scope, we must for a short time consider the second and third groups.

The second group, or those disturbances superimposed on inherited conditions. At present we are unable to tell at the time of birth, and frequently not for some months afterwards, as to whether a child has inherited constitutional anomalies or not. Constitutional anomalies in the sense spoken of here really mean pathological reactions to normal stimuli. In other words, a child fed on foods which would be well tolerated by the normal infant does not react in the normal manner. We have come to believe that

*Read Before the Joint Meeting of the Iowa and Illinois Central District Medical Association with the Scott County Medical Society, Davenport, July 13, 1911.

there are certain conditions of this sort which have a rather distinct clinical picture. These conditions develop active symptoms only later in the infant's life, that is, in the second half of the first year, or at earliest in the second quarter. I speak here of the exudative diathesis and the spasmophilic diathesis, which latter includes convulsions, tetany and laryngospasm.

The third group is one which has not been sufficiently considered in estimating the nutritional condition of the infants whose constitution, and consequently whose tolerance for food, has been markedly reduced by such affections as pneumonia, pyelocystitis, grippe, the acute infections, anemias, and so forth.

Bearing these restrictions in mind, we are in a fair way now to take up the classification of nutritional disturbances *per se*.

Two classifications have been suggested to us. The first, that of Czerny and Keller, classifies nutritional disturbances according to the cause of the disturbance, whether that be fat, sugar, salts, and so forth. This was the first scientific attempt to classify nutritional disturbances, but it does not seem to meet with our requirements as well as that of Finkelstein, who divides nutritional disturbances according to the severity of the clinical picture. The classification of Finkelstein is that which I have followed for the past two years, and which I regard as simplest and at the same time most comprehensive. Finkelstein divides nutritional disturbances into four distinct clinical entities:

1. Weight disturbance.
2. Dyspepsia.
3. Decomposition.
4. Intoxication.

Weight disturbances is that form of nutritional disorder which in most cases is probably caused by too large a fat content in the food. The amount of fat necessary to bring about this condition may be small, but it is relatively greater than the given infant can assimilate with advantage. The consequence of this is that the formation of fatty acids in the intestinal canal requires an excretion of alkalies from the system to neutralize these, causing the formation of the soap stool. This soap stool is hard, dry, and either light yellow or white, unless some article, such as starch or malt sugar, is given in the food, when the dry stool is frequently colored brown. In these cases we have pale, often fat, but flabby infant, extremely cross and one which refuses to gain weight. An increase in food will bring about in most cases either an acute gastrointestinal disturbance, with diarrhea, or the chronic marantic condition. In addition to these findings, we find the hard, dry, white stool already described, and a strongly ammoniacal urine.

The indications for treatment in these cases are very plain. It is necessary, first, that the obnoxious element in the food, the fat,

be reduced, but it is not necessary that the food, as a whole, be reduced in caloric value. Therefore, it is obvious that the fat may be replaced with advantage by some other form of food, and this, of course, means the carbohydrates. As we will see later, it is not well to increase the milk sugar past a certain quantity. We therefore try to give carbohydrates in different forms. A certain amount of milk sugar, a certain amount of malt sugar, usually in the form of malt extract, and a certain amount of starch. The malt extract in these cases seems to have peculiar efficacy in overcoming the marked tendency to constipation, and it is therefore most useful in the severest cases.

The second form of nutritional disturbance, the dyspepsia, is one which is found not only in the artificially fed, but also very frequently in the breast fed, infant. In the breast fed infant it is manifested by the presence of colic, vomiting and increased number of stools. The crying caused by the colic is usually satisfied by the mother by giving an increased number of feedings, and this forms the vicious circle by increasing the colic.

In the artificially fed baby the picture is a fairly well-defined one. Vomiting may or may not be present. The temperature rarely rises about 100 degrees, and usually not over 99.5 degrees. The child is cross and frequently expels gas both orally and rectally. The stools occur to the number of four or five a day, are greenish and contain mucus and curds. This condition is brought about by a too large quantity of sugar either milk or cane, or by a too large quantity of fat in the food. In a general way, when produced by sugar, dyspepsia shows a rather greater tendency to the formation of gas, and frequently the stools are foamy. In the condition due to fat the history of a previous long-continued and obstinate constipation is often afforded, and the stools when examined show large quantities of fat in the form of globules.

In the breast fed infant the treatment is rather simple: Reduction of the number of feedings in twenty-four hours to five, nursing the baby, therefore, four times during the day and once at night. In the severest cases this measure is not sufficient. A twenty-four hours' starvation period, in which the child is put upon barley water sweetened with saccharin, followed by a limitation of the time at the breast to five minutes to a nursing, is in most cases sufficient. In some cases we must admit that the control of the colic is beyond our power, but in many cases these simple measures suffice to bring about comfort to the child in a comparatively short time, if they are closely followed, and the child is given water without the addition of sugar.

The indications for treatment in the artificially fed infant are clear. The sugar and the fat must be reduced to a minum. This is best done by putting the child upon skimmed milk. This skimmed

milk should be regarded only as a temporary measure, and should be gradually replaced by whole milk. It is best in these cases not to use milk sugar at any time as an additional food, but to add some of the malt foods which are on the market, or starch and malt extract. One should not be too anxious to produce a gain in these children because the increase of food past a certain point will bring about a return of the former condition.

Decomposition is what has been known for many years as inanition or marasmus. These are children which, having suffered from previous nutritional disturbances, have an organism so reduced in tolerance for food that if more than a bare living quantity of food is given they react by some distinct indication of nutritional disorder. This condition is found most frequently in children under six months of age, and is most severe under three months. The child is very thin and frequently the subcutaneous fat is almost entirely gone, with the exception of fat in the cheeks. The children gnaw their fingers, as if in hunger. This hunger is rather a result of the inability to assimilate food than of a too low ration. The temperature is regularly subnormal. By this I mean that the average temperature of the day is lower than the average temperature of the normal infant. An increased number of stools and vomiting may be present, but very frequently without any gastrointestinal disturbance whatever, no vomiting and no increased number of stools, these children refuse to gain, although the amount of food is sufficient for their needs. A very characteristic reaction is what is known as the paradoxical reaction, which in a few words may be stated as, the more food the less weight. In other words, when we attempt to feed these children more than a certain amount of food, they react, not in the usual way, that is, by gain in weight, but by distinct loss in weight.

The treatment of these cases demands the keenest judgment on the part of the physician. It is frequently necessary to most carefully dose the food for months at a time, and it is always necessary to have the absolute cooperation of the mother and the attendants. The mother should be made to feel that this condition is a chronic one, and one which can only be handled by months of the most vigilant effort. In these cases I personally have had the best results when feeding them artificially by the use of Finkelstein's albumen milk. This preparation, however, is one which the ordinary physician has not the means of preparing. It consists of curds of a quart of whole milk mixed with a pint of buttermilk, made from skimmed milk, the whole mixture increased to quart. This is given to the amount of about three ounces to the pound weight in twenty-four hours. The carbohydrates in the form of starch and maltose are added quite rapidly.

We have here a food rich in proteid, poor in fat, poor in milk sugar, and poor in the salts.

In the ordinary cases perhaps we can again here resort best to the use of skimmed milk, but in these cases the return to the full value of food must be slow and every step must be cautiously taken. In many cases it is impossible to save these infants unless breast milk is at our disposal. When breast milk is to be used, one must be very careful not to give too much at the beginning, nor must we expect that these children within a very short time will start to gain. It is frequently better if they require several weeks of repair of the constitution, so that the gain, when it comes, may be a healthy one.

Intoxication is that disturbance which we have ordinarily called gastroenteritis, summer diarrhea, ileocolitis, and so forth. In America the prevailing impression is that this condition is due to bacterial infection. Although a superficial survey of the facts may tend to strengthen this position, when we look deeper we must see that bacterial infection does not adequately cover all the points at issue. When we consider that these cases, if taken in the first few hours of the disturbance, can be totally cured by a starvation diet of twenty-four to forty-eight hours, without the use of any drugs whatever, we must conclude that the food itself, aside from any bacteria which it contains, is the source of danger. The addition of sugar to the barley water given in such cases not only prevents recovery, but really makes the condition worse. Finkelstein has conclusively proven that a large proportion, if not all, of these cases are due to the sugar in the food. Milk sugar or cane sugar are especially active, but malt sugar, too, may be the cause of this disturbance.

The symptoms you are all familiar with. The child lies in a half stupor, the eyes starting into space, the mouth half open, and the muscles of the face twitching. The subcutaneous tissues seems to have suddenly vanished. The temperature is high, often reaching 104 degrees to 105 degrees. There may be initial vomiting, and the diarrhea in itself is often alarming. The breathing is of the deep pauseless type, which leads one frequently to think of pneumonia. There is a distinct leucocytosis and in the urine sugar is found, if the specimen is obtained very early in the attack—that is, at the time when the sugar of the food has not been excreted. This sugar in the urine is not the ordinary dextrose found in the cases of diabetes mellitus, but depends on the type of sugar present in the food. Therefore, in the large majority of cases it is lactose. This alone means a very severe disturbance of metabolism. The indications for treatment are obvious. First, removal of the child from all food and the substitution of water. Water is lost not only through the intestinal canal, but also in large quantities through the lungs.

The supply of water is absolutely necessary in these cases, and if the diarrhea is so severe that the loss of water renders the condition extremely dangerous, it is necessary to stop this loss by the use of opiates or some bowel astringents.

For the last few years I have absolutely discarded the use of castor oil and calomel in these cases, and find that my results are at least as good as those previously obtained. Stimulation in the early stage is frequently necessary, and is best given by the continuous saline enema rectally. This, however, may cause a continuance of the fever caused in turn by the sodium choride.

The difficulty in treatment of these cases is not so much in the early stage as later. When the time comes to take the child off of the starvation diet, that is, in twenty-four or forty-eight hours, it is necessary to dose the food very carefully. The proteid is that portion of the food which is harmless, in these cases. For this purpose I have therefore resorted to the expedient of taking the curds of skimmed milk, breaking them up by putting them through a colander, and suspending them in a solution of arrowroot flour. It acts only as a temporary measure. The curds of skimmed milk should be replaced rapidly by the curds of whole milk, and this in turn by the whole milk itself, the carbhydrates being added gradually and not in the form of milk sugar.

It is very necessary in the treatment of these cases to be careful that the mother gives no water sweetened with sugar to the baby. The water given should be sweetened only with saccharin.

In concluding, I wish to state that it has been impossible in this short space of time to give more than a bare outline of the subject. I trust that this outline has been sufficient to guide you in your future work among infants, and shall ask for your indulgence if this difficult subject has not been made plain to you in this brief treatise.

31 N. State St.

REGISTERED NURSES REGISTRY, Phone 1991 Drake Park,
945-20th St., Des Moines, Iowa.

We publish this month the Rules of the Registered Nurses Association of the City of Des Moines. This will be of interest to a large number of the readers of this Journal.

Rules for Registry.

The Registry Committee shall consist of the members of the Executive Committee, namely, the President, Secretary and Treasurer and two other members of the Registered Nurses Association, appointed by the President.

Section 1. The Des Moines Registered Nurses Registry shall be under the immediate care of a Registrar, who shall be a registered nurse in good standing and a member of the Des Moines Registered Nurses Association. She shall be employed by the Association at a stated salary, and while so employed shall not be eligible for office in the Association.

Section 2. The Registrar shall be at all times responsible for the work of the Registry. She shall not leave the Registry without a competent person in charge, having written directions. She shall keep a complete set of books and make a full written report to the Association at the first

meeting of each quarter. She may collect and receipt for money due the Registry and pay over the money to the Treasurer of the Association once a month.

Section 3. A special report shall be kept by the Registrar of every nurse sent out, with the data, name and address of patient or physician, if same can be secured.

Section 4. The Registrar shall at any time when requested attend the meetings of the Executive Board.

Section 5. All complaints whether against the Registrar or members must be made in writing, duly signed, and sent to the president only who shall lay the matter before the Registry Committee for investigation.

Section 6. A two-thirds vote of all members of the Registered Nurses Association is required for a change of Registrar. The registrar shall give two months' notice in writing, to the Registry Committee if it is not possible for her to hold said office.

Rules For Members.

Section 1. A list of all nurses registered shall be kept by the Registrar, with school from which they graduated, the language they speak, the class which they prefer or object to, and their schedule of prices.

Section 2. Nurses making an engagement **must report at once by telephone or card.** If notice is not received within 48 hours after the engagement is made, the cause of such omission shall require investigation by the Registry Committee. If the nurse is found to be in fault she will be fined \$1.00 for each offence and suspension after third offense.

Section 3. Nurses reporting for duty are placed at the foot of the list. When no request is made for the particular nurse, the Registrar shall, if possible, send the first one on the list who is registered for the class of work to which the case belongs. Refusal of any case for which a nurse is registered shall place her at the foot of the list, unless a valid excuse be given the Registrar.

Section 4. After nursing contagious or infectious diseases, the nurse may be sent to any case at any time, provided the physician has been informed of the facts and the nurse gives assurance that she has properly disinfected and is herself in good physical condition.

Section 5. When a nurse's name heads the list, she shall receive notification from the Registrar to that effect, and after this she must not be out of reach of the Registry for more than two hours at a time without notifying the Registrar of the fact. If a nurse is beyond call of the Registry for a longer time, she may lose the call, but not her place on the Registry.

Section 6. In case of illness a nurse should report at once to the Registrar and when ready for duty shall be entitled to the first call for the class of work to which she is registered, providing her illness has been protracted three weeks or more. Otherwise she shall be entitled to the same place on Registry held previous to her illness.

Section 7. The Registry fee shall be \$8.00 per year, payable semi-annually in advance in January and July. This fee shall cover the initiation fee of the Association and the Registry dues for the fiscal year of new members. Members joining the Registry after January or July shall pay at the rate of \$1.00 per month until the next semi-annual payment is due.

Section 8. Nurses listed for work on the Registry are requested to notify the Registrar as soon as possible after accepting private calls.

Section 9. A nurse at the head of the waiting list may, with the knowledge and approval of the Registrar, give a Registry call to another nurse, taking the place of the latter on the list.

Section 10. These rules may be amended at any regular meeting or at any special meeting called for that purpose, provided that notice of change proposed be mailed to each member of the Association at least one week before said meeting.

Note.—The Committee will be glad to meet any of the nurses at the regular meetings to receive suggestions which will add to the efficiency of the Registry.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

ESTABLISHED AND ORDERED PUBLISHED MONTHLY BY THE HOUSE
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D. S. Fairechild, M. D.....Clinton

EDITOR

C. A. Boice, M. D.Washington

ASSOCIATE EDITOR

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Vol. 1.

Clinton, August 15, 1911.

No. 2

Iowa at the American Medical Association.

Iowa was well represented at the Los Angeles session of the A. M. A. Fifty-five names were registered. Only California, Illinois, Indiana, New York, Ohio and Pennsylvania had a larger registration.

It will be gratifying to know that Dr. Walter L. Bierring was elected 1st Vice Chairman of the Section on Medicine and Dr. A. L. Wright of Carroll, 4th Vice President of the Association, Dr. Bierring did himself credit and rendered valuable service to the Association as Chairman of the Reference Committee on sections and section work.

The election of Dr. Jacobi as President of the Association was a grateful recognition of the great merits of a man who has devoted a long life to the best professional work. The merits of the other candidates for this high office were fully recognized and it is no reflection on these men that Dr. Jacobi received the majority of votes.

The Los Angeles Session.

The Los Angeles session of the American Medical Association was in every respect interesting and satisfactory. The long journey no doubt was looked upon with dread and no little apprehension was felt as to the effect of the heat in crossing the desert. Notwithstanding these objections, loyalty to the Association and a desire to see again or to see for the first time the wonders, mysteries and beauties of the mountains, the desert and the Pacific Coast, led a surprising number of the doctors from the furthest east, from the

south and from the middle west to undertake the trip. If any found the journey long and tiresome, they did not go over the Sante Fe road. The writer has attended the sessions of the Association near on to forty years and has never seen trains moved with equal precision and with so much comfort to the passengers. Seven heavily loaded trains moved out of Kansas City Wednesday morning reaching Grand Canon Saturday morning and after a little more than twenty-four hours for sight seeing moved on with the same precision the remainder of the journey to Los Angeles without an accident to passenger or to equipment. Each claimed the best dining and sleeping car service.

Dr. Wiley.

The country is no doubt anxiously waiting to see what President Taft will do with Dr. Wiley. A large number, which includes the masses of the people, are hoping the President will support Dr. Wiley by continuing him in his present position. A small number relatively, which includes the "interests" are hoping that he will be dismissed. It seems strange, that a committee of Congress should find fault with a technical irregularity in compensating high grade experts services which could not be obtained for the small allowance granted, and at the same time, Congress grant large sums to attorneys engaged in prosecuting trusts. It is assumed apparently, that the people are indifferent to the dangers of impure foods and drugs, but that they are alive to the dangers of financial combinations. From the comments found in the daily and periodical press somebody has made a mistake. The impression we gain is, that nothing has come up in Washington in recent years, not excepting the prosecution of the standard oil, and tobacco trusts that has excited a more active interest among the people than this effort on the part of a most unholy combination to get rid of Dr. Wiley and defeat the operations of the pure food law by making it impossible to secure competent and independent experts.

The Fight on Dr. Wiley.

If Dr. Wiley is to be removed from his office it must be upon other grounds than zeal for doing his duty. Mr. Taft is hardly likely to walk blindly into the same error which prompted him to listen to the enemies of Messrs. Glavis and Pinchot. Public servants of the character of Dr. Wiley are not so common that they may be dispensed with for unimportant fractures of governmental rules.

Dr. Wiley would be the last to complain of the stir which has been raised about his office. He has learned thereby how high he stands in the opinion of the people he has served through opposition and calumny. Though he may have spent money recklessly in the

instance and may have been careless as regards the regulations of his department, no change, to our knowledge, has ever been made that he has accepted a dishonest penny. His present opponents, indeed, show want of foresight. If Dr. Wiley were dismissed, his labors would be extended. He would gain a wider hearing, a larger following. We happen to know that he is being importuned for a series of articles which would review not only his work for pure food and drugs, but would also tell the full story of the numerous fights in which he has been engaged.

It is unlikely that Dr. Wiley will go. (Editorial Toledo Blade, Jul. 27)

In fighting Dr. Wiley let nothing but the pure and unadulterated facts be used.

The Judicial Council.

The reorganization of the Judicial Council was a piece of good work. An amendment to the By Laws was adopted by the House of Delegates after the matter had passed through the hands of the Committee on "Reports of Officers" and the Committee on "Constitution and By Laws."

The amendment reads as follows:

"The Judicial Council shall consist of five members, who shall be nominated by the President and elected by the House of Delegates. At the annual session in 1911 one member shall be elected to serve for five years, one for four years, one for three years, one for two years and one for one year, and thereafter one member shall be elected each year to serve for five years. It shall select a chairman from its membership. The Secretary of the Association shall be, **exofficio**, Secretary of the Council. It shall expend money and contract debts only upon the authority of the Board of Trustees. It shall keep a permanent record of its actions at its office which shall be at the headquarters of the Association. It shall make an annual report of its decisions and the results of its investigations to the House of Delegates.

The judicial power of the association shall be vested in the Judicial Council, the decisions of which shall be final, and shall extend (1) to all cases arising under this constitution and by-laws, (2) to all controversies to which the American Medical Association is a party, to controversies, (3) between two or more recognized State or Territorial Associations, these being constituent associations within the meaning of Art. 4 of the Constitution, (4) between a constituent association and members of another association, (5) between members of different constituent associations.

In all cases in which the American Medical Association or one of its constituent associations is a party the Judicial Council shall

have original jurisdiction. In all other cases before mentioned the Judicial Council shall have appellate jurisdiction, both as to law and fact, with such exceptions and under such regulations as it may adopt and publish in the Journal, provided that such regulations must be approved by the next ensuing session of the House of Delegates, and be officially certified to each constituent association. The Judicial Council may investigate professional conditions and all matters pertaining to the relations of physicians to one another and to the public and shall make such recommendations to the House of Delegates and the constituent associations as it deems necessary."

It is expected that the Council will begin its work by rigid inquiry into the division of fees practice, beginning with medical college professors. An effort will be made to fix a standing of colleges according to the willingness of the colleges to retain on their faculties, men who are guilty of this practice or against whom there is a suspicion of questionable methods in this respect. There is certainly a need of clean men who are to influence medical students.

Society Membership.

We publish this month a table comparing the membership in the various component county societies of the state for the past five years. The table for the present year is not exact nor complete because several county societies are short in their reports and one or two have sent in no report at all. These figures are taken from the mailing list as furnished to the Journal.

In the Journal for January 1912, the editors expect to publish the roll of the membership of the component societies. In the larger cities, we would greatly appreciate having the office or street address. Since mailing the July Journal, a number of complaints have come in. Some were from post masters who were unable to deliver the Journals; some were from physicians who failed to get the Journal. The Journals were sent out to the addresses as furnished by the secretaries. Several names were misspelled, some addresses were omitted. The officers of each society should see that every eligible man in the county is in the society. Send in your complete reports to Secretary Treynor and let us have the largest membership ever reported to publish the January Journal. Effective co-operation will increase the membership roll by at least five hundred this year.

The Hospital Situation.

The House of Delegates established a section on hospitals. This matter came up last year and was laid over. We are of the opinion that it is a move in the right direction and will ultimately be productive of much good. The general public seem to have but little knowledge of what a hospital should be and we regret to say that

a large body of the profession show but slight willingness to help in the matter. There is apparently a narrowness or selfishness on the part of many physicians which sadly interferes with getting the most out of the hospital facilities as they now exist, especially in our smaller cities. In Iowa we have many hospitals which could do good work if they were better organized. As they now stand, most of them are little better than boarding houses for the sick. It is sometimes pathetic to hear the boastful claims of the Board of Managers or of the Superintendent on showing a very good building but destitute of a laboratory and of any scientific apparatus or means of diagnosis or investigation of any kind. We are assured that all the Doctors in the town are on the staff and that many operations of all kinds are performed by every one and that since the hospital was opened, there has been a great revival of surgical practice in the community. If one examines the institution with a critical eye, it will soon be discovered that in some respects the building of a hospital was the most unfortunate thing that ever happened in the community, while in other things it was a blessing. One is astonished to know how many surgical and how few medical cases are found in the small community. This is a condition that ought not to exist and would not if a little more intelligence and a little more honesty could be found in the management of these institutions. If any one protests against this surgical exploitation he is said to be a crank and should not be listened to. The more intelligent of the laity understand the situation and often go away from home to have their operations performed. It is not an uncommon thing, I imagine, for members of the Board of Managers to do the same thing, and the local profession discover, as they think, that the reason for this lies in the advertising skill of outside surgeons. We have found but few local surgeons who could apparently figure out the real reason why so many desirable patients seek more or less distinct hospital treatment.

Let us analyze our own hospital situation and see if there is not some other reason than the one generally given why desirable patients go away (of course the very rich are never to be counted) for surgical treatment. The superintendent is generally selected because she is the friend of somebody else's friend who is a friend of some member of the Board and is rarely sought for because she has earned a reputation in real hospital work. She is a creature of the Board and not supposed to have any independent views of how hospitals should be managed. The entire supervising force is likely to be made up in this same way. The question will be "Are these people suitable," that is, are they agreeable, not if they are capable and efficient. The salaries are small, economics are badly practiced, discipline is poor and the time of the pupil nurse is too much taken

up with menial work. The records are carelessly made and unintelligible. As might be expected, the results in a hospital sense, are bad. Mild infection is found in a large per cent of clean cases. Conscientious doctors who protest fall into disfavor. The presumptuous and careless gain favor apparently because they are always so well pleased with everything. This condition of things continues until the institutions falls into disfavor and a reorganization follows.

All hospitals in our smaller cities are not like the ones above outlined, but too many will answer this description. The fundamental difficulty lies in the selection of a Board of Managers. The plan of making up a board is not altogether unlike the making up of a card party. People of the same social group or ones who have been liberal in giving money are placed in responsible positions, which really require a certain amount of special knowledge, and until some better way is found of organizing a managing board, this unfortunate condition in regard to our smaller hospitals will continue. At the present time there is a growing tendency to the organizing of county hospitals in sections of the state where there are no larger cities. This may serve a very useful purpose or it may be very unfortunate. All will depend upon the manner in which these hospitals are organized, and managed. The tendency has been in the organizing of hospitals to disregard the opinion of medical men. The board of managers have felt that they organized and managed the institution and invited doctors to come in and fill up their institutions. There has been as a rule no close contact between the managing board and the hospital staff and apparently each one has been trying to get as much out of the other as possible regardless of the real interest of the patients. Now this is altogether wrong. There should be a close co-operation between the board and the staff and their work should be directed to the best interest of the patient.

The editor of this journal has felt that for many years something could be done by a close co-operation on the part of the better class of the profession and those who undertake to manage hospitals. We have stated in rather plain terms what the conditions are at present. In the next number of this journal, we shall point out how these evils may be corrected and how a hospital can be made of the greatest service to those who are unfortunate enough to need hospital care and how a hospital can be utilized for the betterment of the conditions in the profession, and how a pleasant and profitable co-operation can be established between the managing board and the staff.

On page 41 of the July Journal, in the report of the Committee on Necrology, Dr. C. W. Vroom was listed as having practiced in Whitten since 1887. Dr. F. P. Butler informs us that the Doctor had spent most of his professional career in the town of Ackley, Iowa.

To the Members of the State Medical Society.

So many defects are found in our mailing list that it will be necessary to completely revise it. Numerous letters have been received complaining that members have not received the journal. Dr. C. A. Boice is doing his utmost to get a list of members from the secretaries of county societies. It is urgently requested that these lists be made out and forwarded to Dr. C. A. Boice at Washington, Iowa, as rapidly as possible.

In the January number or perhaps earlier, a list of the members will be published. This directory will not contain the names of those who are not members for it will be assumed that all real physicians in Iowa are members of the Society. No physicians will be recommended for life insurance examiners or for appointment for railway or military service whose names do not appear on this list.

To the President and Secretary of each County Society and of each District Society:—

The Journal of the Iowa State Medical Society wants copies of the programs of your society **regularly**. Also send in early and complete synopsis of the meeting, with abstracts of interesting papers. This department of the Journal will be just as helpful as you make it. Newspaper clippings of medical events will be appreciated. In case of deaths among the membership, please furnish the Journal an appropriate obituary at once. Send this matter to the Associate Editor at Washington.

Suggestions to Authors.

In order to make the Journal have the best possible appearance, and have a uniformity of style, the editors make these suggestions. A careful observance of these points will lighten the work of the editors and make a readable Journal. Manuscripts must be type-written, well spaced between the lines and with ample margins. Write on one side of the paper only. Send the original copy, **not** a carbon copy. Carbon copies are not plain and it is often impossible for the printer to make out the letters. See that all words are correctly spelled and that the manuscript is punctuated as it should be. This is important for a misplaced punctuation mark as it should be. This is important for a misplaced punctuation mark wide margins greatly simplify the work of the editors in giving directions to the linotype operator. Be consistent in the use of pronouns. The author of a paper should not refer to himself indiscriminately as the "writer," "author," "I" or "we." Adopt one descriptive pronoun and use the same one thro'out.

In using quotations; quote exactly, enclose in quotation marks, and give authority.

Galley proofs will be sent to the author. Make corrections on the margin of the proof sheet. Return at earliest possible time, the **proof and original copy**, as the editors frequently need the original copy. A slip giving prices of reprints will be enclosed with each proof. If an author desires reprints, they **must** be ordered at the time of returning the proof. Reprints are furnished at printers' cost. Authors are requested to bear with patience the slight alterations in form which it is frequently necessary to make in the best and most carefully prepared manuscripts in order that there may result no unpleasing discrepancies in the style of the Journal.

DR. FREDERICK ALBERT.

Dr. Frederick Albert died at his home in Mason City, July 22, 1911. Death was due to typhoid fever, the end coming during the third week. He leaves a wife and an infant daughter, also his parents, who live at his former home—Reinbeck, one sister and several brothers—one of whom is Dr. Henry Albert of Iowa City. Dr. Albert was twenty-nine years of age and had already made a name for himself as a bacteriologist. He was Health Officer of Mason City and President of the Iowa Health Officers Association. An earnest, conscientious physician. Interment was in Reinbeck.

Society News.

Preparations are under way for the meeting of the South Eastern Iowa District Society in Washington next November. This is one of the oldest district societies in the State having been organized in Washington thirty-seven years ago. It is always well attended, has excellent programs and makes much of the social features, having had a banquet at every meeting since 1890. An arrangement Committee has been appointed, consisting of Drs. G. W. Hay, E. T. Wickham, H. C. Hull, C. W. McLaughlin and C. W. Stewart. Washington is well located for this meeting as all trains reach the city before ten o'clock in the morning and leave between six and seven in the evening.

The Des Moines Valley Medical Association met in Ottumwa June 15, 1911. The following program was carried out in full under the Presidency of Dr. L. W. Littig. The President held a stop watch on all the participants in the program and time was thereby saved to good effect.

Toxemias of Pregnancy	Dr. S. K. Davis
	Libertyville, Iowa.
The County Hospital	Dr. L. D. James
	Fairfield, Iowa.

Headaches	Dr. H. A. Leipziger Burlington, Iowa.
The Use of Vaccines	Dr. L. Reppert Muscatine, Iowa.
President's Address	Dr. L. W. Littig Davenport, Iowa.
Experience in Post Partum Hemorrhage.....	Dr. Mattie Crain Deep River, Iowa.
Emergency Surgery Other than Accidental ..	Dr. D. C. Brockman Ottumwa, Iowa.
Indications in Inflammations of the Middle Ear,	Dr. G. F. Harkness Davenport, Iowa.
Serum Therapy of Puerperal Infection.....	Dr. C. A. Boice Washington, Iowa.
Surgical Treatment of Acute Intestinal Obstruction,	Dr. Geo. Cullen Des Moines, Iowa.
The Surgical Treatment of Acute Articular Rheumatism,	Dr. A. M. Pond—Dubuque, Iowa.
Acute Infectious Arthritis with special reference to the Knee Joint,	Dr. W. H. Rendleman, Davenport, Iowa.
Post Operative Neurasthenia	Dr. H. C. Eschbach Albia, Iowa.
Diseases of the Circulatory System in Later Life,	Dr. J. F. Herrick Ottumwa, Iowa.

At noon, a luncheon was served to the Doctors and their wives by the ladies of the First Congregational Church. This luncheon is an annual affair and is always well attended and duly appreciated. Dr. T. J. Shuell of Parnell was an ideal Toastmaster. Toasts were responded to by Drs. S. K. Davis of Libertyville—"The Professional Smile": W. W. Eastburn of Sigourney—"The Country Doctor": D. S. Fairchild of Clinton—"The Doctor and Legislation": H. C. Eschbach of Albia—"Exceptions": A. O. Williams of Ottumwa—"The Evolution of the Doctor."

This was the largest and best meeting the Society has had for several years. The following were elected officers for the ensuing year.

President—A. O. Williams, Ottumwa.
First Vice-Pres.—W. W. Eastburn, Sigourney.
Second Vice-Pres.—S. K. Davis, Libertyville.
Sec'y-Treas.—Fred Bowles, Ottumwa.

The Iowa and Illinois District Medical Society and the Scott County Medical Society held a joint session at the Outing Club, Davenport, July 13th.

The I. and I. District Society held its annual election with the following officers:

President—H. M. Decker, Davenport.
Vice-President—W. W. Adams, Geneseo, Ill.
Secretary—L. W. Littig, Davenport.
Treasurer—F. H. First, Rock Island, Ill.

After this business meeting, the members of both societies joined in a midday luncheon, at which sixty were present.

The scientific program, beginning at two o'clock, was as follows:

1. The Medical Department in the Army Maneuvers at San Antonio—C. S. Young, M. D., Geneseo.
2. The Surgical Treatment of Internal Hydrocephalus—E. Wyllys Andrews, M. D., Chicago.
3. Antiseptics and Disinfectants—G. E. Decker, M. D., Davenport.
4. Classification of Nutritional Disturbances in Infants, with the General Indications for Treatment.—C. G. Grulee, M. D., Chicago.
5. Enlargement of the Spleen, with Exhibition of Case.—A. E. Williams, M. D., Rock Island.
6. President's Address—S. B. Hall, M. D., Rock Island.

MEDICINE IN IOWA FROM ITS EARLY SETTLEMENT TO 1876.

D. S. FAIRCHILD, M. D. Clinton, Iowa.

The Iowa State Medical Society at its May meeting in 1875 provided for the appointment of a Committee whose duty it should be to prepare a History of Medicine in Iowa for the Centennial year, 1876. In accordance with this proposition the President, Dr. W. F. Peck, appointed a Committee consisting of Drs. J. Williamson and S. B. Thrall of Ottumwa. Dr. A. P. McCullough of Brooklyn, Dr. W. D. Middleton of Davenport and Dr. D. S. Fairchild of Ames.

The Committee through its chairman, Dr. Williamson, submitted the following circular letter to all leading physicians in the state.

"The following hints as to matters which should be covered in reports may be of service."

The history of epidemic or endemic diseases of your county or section of the State.

The effects, if any of cultivation of soil upon disease.

The indigenous medical plants, mineral waters, etc. Biographical and historical notes of pioneer physicians, positions of honor held by them etc. Medical societies, county and district, when organized and present membership. (1876).

Capital operations in surgery by whom and with what results.

How far and with what success have local authorities supplied the lack of state legislation on regulating the practice of medicine. Give the population of your county and the number of practicing physicians in it. How many are graduates and how many are not. Distinguish as to sex and so called "Schools of Medicine." Medical Colleges, their full history from the date of their organization to the present time, (1875). Hospitals, public and private, their capacity, etc.

The Committee organized and divided the territory assigning a certain number of counties to each member.

At the 1876 meeting of the State Society, held in January, Dr. J. Williamson, Chairman of the Committee reported "That after sending out a number of the circulars to the profession of the State and also many personal appeals to individual members, he had been

entirely unable to procure responses or collect data which would amount to a respectable report. That he had exhausted his means of procuring information and as he had now been placed on the Committee on publication he must positively decline to serve on the former Committee.”

The matter referred to the nominating committee and Dr. D. S. Fairchild of Ames was made Chairman of the Committee and Dr. J. J. M. Angear of Ft. Madison was added in the place of Dr. Williamson.

On assuming the duties of Chairman of the Committee, Dr. Fairchild made another appeal by letter to such members of the profession as his judgement would be most willing to prepare the data desired and after repeated efforts and putting together fragmentary reports from different gentlemen, such matter as here offered was obtained.

A history of medicine in twenty three counties was obtained. In some instances the reports were complete and satisfactory, in others incomplete but much valuable information was obtained which may be interesting to the profession today, as an entirely new generation of medical practitioners occupy the field made vacant by the death or retirement of the men who were active in 1875. Nearly all the men associated with me either directly or indirectly in the preparation of this work are dead. It gives me great pleasure, indeed, to revive a recollection of some names that were prominent in the medical profession in Iowa 35 or 40 years ago, especially in view of the fact that the practice of medicine has undergone such radical changes that anything that occurred prior to 25 years ago is looked upon as ancient history and the Doctors of that day appear in the dim past. Not only does this apply to the practice of the healing art but also the methods of getting on. I often hear men still living who were active in the earlier days say that inherited traditions of the past had become so fixed in their minds as a part of their professional training as to be really burdensome now under the changed conditions. It has some times appeared to me that these things are said in a spirit of reproach, but it should be understood that the immense and radical changes which have taken place and are still going on must necessarily sweep away many of the ethical notions which governed the profession 40 or 50 years ago.

The history of medicine in Iowa in its earlier days consisted mainly of the records of medical cases and epidemics of disease. Very little had been undertaken of a surgical character. It was generally conceded that special consultations and surgical operations should be referred to the medical centers in large cities to men who had not only received special training but possessed a special and particular aptitude for surgical work.

Appanoose County.

The data for Appanoose County was furnished by Dr. S. W. Sawyer of Centerville, Iowa.

Dr. Sawyer says:—During the early settlement of the County, the principle diseases were malarial fever and catarrhal pneumonia. At this time—1849 to 1853—these diseases were usually sthenic in character and were almost invariably treated by vene-section, calomel and quinine.

There is no medical society in this vicinity (1875) but Dr. Sawyer states that “Steps are being taken however to organize one.”

Pioneer Physicians.

Drs. Udell, Pralten, Manson, Saltsgion, Field and Cottle, were among the pioneer physicians of Appanoose County. Dr. Udell was three times elected to the state senate. Was surgeon to the 36th Iowa Volunteers. Dr. Scott, assistant surgeon to the 33rd Iowa Volunteers.

Epidemic Diseases.

A very wide spread epidemic of scarlatina of severe form prevailed in the western part of the county in 1852-53.

Typhoid fever first made its appearance and prevailed quite extensively in 1853.

In 1856 forty cases of small pox occurred in the county.

An epidemic of Cerebro-Spinal meningitis occurred in the winter of 1863-64, which proved very fatal and has occurred repeatedly since.

Diphtheria prevailed as an epidemic in 1856. The first cases nearly all proved fatal.

A very extensive and fatal epidemic of erysipelas occurred in 1865.

Puerperal fever prevailed as an epidemic in 1873-74.

Croup in the spring of 1874 prevailed as an epidemic.

The number of physicians practicing in Appanoose County in 1875 was 34. The number holding diplomas 16, non graduates 18; males 31, females, 3.

Classified as follows:—

Regulars 16, Homeopaths 2, Eclectics 8, Nondescripts 5; all males.

Females; Regular 1, Nondescripts 1, Eclecticicians 1—3 .

Surgical Operations.

All the surgical operations which could be found were performed by Dr. Sawyer.

Amputation of the Thigh 5; one death.

Amputations for the Leg 3; one death.

Amputations of the Arm 1; Recovered.

Amputations for the Hand 1 Recovered.

Amputations of the Penis 1; Recovered.

Amputations of the Mammary Gland 1; Recovered.

Operation for:—

Inguinal Hernia 1; Recovered.

Imperforate Anus 1; Recovered.

Boone County.

A medical society existed in Boone County in 1866 called the "Boone County Medical Society". A few meetings were held but owing to a want of interest on the part of its members it was soon in "Articulo-mortis." April 21st, 1871, a new society was organized, called the "Boone County Medical Society", with 14 members. Dr. L. J. Allerman was elected President and Dr. A. A. Deering, Secretary. Four or five meetings were held and this society followed its predecessors.

June 2nd, 1874, a society was organized at Boone, called the Central District Medical Association of Iowa consisting of regular physicians practicing in Boone, Story, Green and Carroll Counties. Dr. P. S. Boonsboro was elected President and Dr. Charles Enfield of Jefferson, Secretary. The society now numbers 25—(1875) and holds its meetings on the 3rd Tuesdays in June and December.

Pioneer Physicians.

Dr. P. S. Moser, the only son of the late Dr. Phillip Moser of Charleston, South Carolina, was born in Charleston, S. C., July, 1829. He graduated from the University of Penn., 1852, and moved to Muscatine, Iowa, in April of the same year. In March, 1854, he moved to Boonsboro where he engaged in an extensive practice.

Dr. Moser was indeed a pioneer physician and surgeon. At the time he located in Boone County, there were no railways in Iowa and the country was but thinly settled, in fact, the only settlements were along the water courses where timber could be easily secured. In times of need it became necessary for physicians situated as was Dr. Moser to ride long distances, often over very uncertain roads, subject to hardships which can now scarcely be appreciated. Dr. Moser was a dignified and courtly gentleman of the old school, southern type. He had many characteristics which distinguished him from other men, but was altogether a man of marked ability.

Dr. L. J. Allerman, a native of New York, graduated from the University of New York City in 1864 and commenced practice in Boone in 1866 where he rapidly acquired a large practice.

Among other pioneer physicians may be mentioned: Drs. DeTar, Holden, Rice, Hull, Parr, Pollock, Simons and Royster, of these men no data could be obtained upon which to construct a biographical sketch.

There is no history of epidemic diseases having prevailed in this County prior to the spring of 1876 when diphtheria appeared in a very fatal form.

Number of practicing physicians in Boone County in (1875)-19.
 Regular Graduates 13.
 Eclectics, not graduates, 5.
 Homeopaths, 1.

Surgical Operations.

1860—The first amputation was in 1860. Upper third of thigh. Drs. Pollock, Moser and Wood—Recovery.

1861—Amputation of leg. Drs. Moser and De Tar—Recovery.

1861—Amputation of upper third of thigh. Drs. Moser, Parr and DeTar—Recovery.

1862—Amputation of lower third of thigh. Drs. Parr and DeTar—Recovery.

1862—Amputation of lower third of arm. Dr. Moser—Recovery.

1863—Amputation middle third of leg, Dr. Moser—Death.

1867—Amputation of leg, Dr. Gerard—Recovery.

1867—Amputation upper third of thigh, Drs. Moser, Allerman and Gerard—Death.

1868—Amputation middle third of thigh, Dr. Allerman—Recovery.

1873—Amputation at shoulder joint, Drs. Allerman and Rowe—Recovery.

1873—Amputation of middle third of arm, Dr. Moser—Death.

1874—Amputation of upper third of leg, Dr. Moser—Recovery.

1874—Amputation of lower third of leg, Dr. Moser—Recovery.

1873—Herniotomy, Inguinal, Dr. Rowe—Death.

1874—Amputation of upper third of leg, Dr. Allerman; Recovery

1874—Amputation of upper third of leg, Dr. Allerman—Death.

1875—Amputation of the upper third of leg, Dr. Allerman—Recovery.

1875—Amputation of the lower third of leg, Dr. Allerman—Recovery.

1875—Ovariectomy, Drs. Meeker and Moser—Death 8th day.

1875—Amputation of the lower third of thigh, Drs. Moser, Allerman and Rowe—Recovery.

1876—Herniotomy, Inguinal, Dr. Palmer—Recovery.

In addition to the above list of surgical operations, Dr. Moser added from his personal list, 5 cases of trephining for fracture of the skull.

Chopart's Amputation,	1
Excision of the Elbow Joint,	2
Vesico Vaginal Fistula,	1

Tracheotomy,	1
Talipes Varus,	7
Paracentesis Thoracis	5
Paracentesis Abdominalis	19
Amputation of Cervix Uteri	3
Uterine Polypi	27
Sims Operation, Dysmenorrhea,	9
Rupture Perineum,	2
Fistula in Ano	8
Necrosis of Tibia	4
Necrosis of Other Bones,	4

THE BUSINESS BUREAU FOR COUNTY SOCIETIES.

By Henry Glover Langworthy, M. D., Dubuque, Iowa.

As I have received a number of requests for further information relative to the success and general management of the Business Bureau of the Dubuque County Medical Society, an additional report along these lines will perhaps not be amiss. It will give a much clearer idea of the plan at least than could possibly be conveyed by word of mouth. The Bureau first established in Dubuque in January, 1910 after some twelve months endeavor is proving a success. Our first year was naturally the most trying one as almost without exception all early bills turned in had passed through other hands for collection, in some instances repeatedly without results, making it hard for the Bureau to get a good start. It would be surprising to a business man I think to learn that a considerable number of first bills handed in had been allowed to become legally outlawed by the time limit of five years on book accounts.

At the end of the first year our committee made a report showing that the establishment of the Bureau as a permanent department had resulted in a saving to the society of an average of about one hundred dollars a month and this out of accounts considered lost. To do this however all bills had to be carefully investigated and the large majority of debtors visited personally by the attorney. Many debtors were induced to pay at the rate of one dollar a week or month as the case might be. We have found that there is really but one practical division for old accounts, namely: (a) collectable: and (b) uncollectable. A bill on which fifty cents or one dollar a week is being paid should be placed in class A as it is collectable.

The Bureau has been of especial value in dealing with delinquents as it stands ready to collect at once or to bring early suit in court at a minimum cost and without inconveniencing the physician to any extent. The optional feature, allowing physicians to turn in only accounts as they may desire, is the real basis of good feeling and guarantee of future success for the bureau. Societies are under no expense with the plan as many young attorneys will be found glad to take up the work on the basis outlined. The Bureau in the very beginning should have its official letter headings, envelopes, letter forms, etc. with the bureau-heading, office address and attorney's name printed thereon. The follow-up letters of the office are succeeding admirably in Dubuque. Recently I sent a letter to all mem-

bers in the City and County to request them to send in bills just the minute they conclude that the account might prove troublesome to collect by mail. The letter read as follows:

Dear Doctor:

The Business Bureau has been established for your benefit and we ask your co-operation in making it a success. We urge that bills outstanding any length of time, be sent to the Manager of the Bureau at once.

Objects of the Bureau.

- (1) To prevent accounts being out-lawed.
- (2) To educate the public toward the same promptness in paying a physician's bill as a merchant's.
- (3) To create a clearing house for accounts where they are certain to be collected unless the debtors are absolutely worthless.
- (4) The Bureau at all times is ready to advise physicians as to the reliability of any person.
- (5) A list is now being made by the Bureau containing names of the dead beats which will be sent to members as soon as completed.
- (6) All accounts will be returned after the Bureau has held them one year and will be classified as uncollectable.

If accounts are sent to the Bureau as soon as payment has been refused much better results can be expected of the managing attorney.

Signed— Committee: Dr. H. G. Langworthy, Chairman.
Dr. J. C. Hancock.
Dr. H. T. Walker.

A letter of this kind after the bureau has been established some time should enlarge the scope of the work and remind physicians that they must turn in uncollectable accounts much earlier than formerly as the chance of losing them increases rapidly as time goes by.

Our Attorney last year to whom much credit for putting the Bureau on a popular and permanent basis was Mr. John G. Chalmers at one time head coach of the University of Iowa. This year the Bureau is being managed by Mr. John R. Waller, one of our active younger attorneys of the city who is doing good work.

I think it will be granted by physicians that there is in Iowa a distinct need for county medical societies keeping better track of the people who do not and will not pay honest doctor bills. While there is a whole lot being written on the business side of the profession just now, in the main it can be boiled down to these things: First, Make a proper and fair charge for services rendered. Second, Use more business-like methods, as well as co-operative methods in collecting what is rightfully our due. There is too much price-cutting going on for safety. The public has had a too poor an opinion of the doctor as a business man. The profession hasn't had enough intelligence to get together and treat the dead-beat as a strictly charitable individual and keep track of him so that he cannot take up valuable earning time. Just because we hear the cry of unionism against a few county medical societies that have gotten together on an intelligent understanding as to fees and taken a stand to protect themselves a few faint-hearted physicians have thought the term undignified. That the Business Bureau has come to stay goes without

saying. It recognizes the fact that we must send out bills more frequently, see to it that systematic quarterly collections are made by a competent society attorney when our own efforts fail and lastly list the people who go from doctor to doctor without any intention of meeting their obligations. The following is the official copy of our Business Bureau for this year. The writer trusts that the same will appeal to society officers especially so that the plan may be put into operation. Printed copies furnished on application:

Copy of a Practical Business Bureau for County Societies.

The following agreement between the Business Bureau Committee of the County Medical Society, party of the first part, and Attorney, party of the second part shall be for a period of one year, said Bureau to be conducted along the lines and governed according to the following:

1. That shall act as Attorney for the County Medical Society in the capacity of conducting the business of the "Business Bureau" of said society, and pursuant thereto said Attorney will call every three months upon physicians who are members of the County Medical Society for statements of accounts and will give receipts for same. That he will keep a separate and private file for each physician's accounts and correspondence. That he will keep a complete system upon which will be notated the exact status and progress of each account. That he will make quarterly returns direct to the physicians as the Business Bureau Committee may direct. That he will not bring suit on accounts without authorization and private arrangements with the physician. That he will assist the committee in auditing accounts. That each physician's account will be open to his inspection at any time, but to no other physician, and all other business matters will be kept absolutely private. That due diligence will be exercised in collecting all accounts turned over, and prompt settlement made after collection.

2. That the respective physicians will submit itemized statements of such accounts as they desire to place in the collector's hands. That physicians will receive remittances made directly to them by debtors. That on remittances made directly to the physician on accounts in the Attorney's hands, commission will be paid but no commission will be allowed on bills remaining unsettled or on money not collected.

3. That the Committee of the Business Bureau of County Medical Society, may at any time, audit the accounts in the hands of the Attorney and shall in cases of dispute distribute to the Attorney the amount of his commission and to the Physician the amount due him on such accounts. That the commission to the attorney on accounts collected in payments or installments the schedule per cent, per payment, will prevail:

Collections of \$2.00 or under	50 per cent Commission
Collections of 3.00 or under	30 per cent Commission
Collections of 4.00 or under	30 per cent Commission
Collections of 5.00 to 10.00	25 per cent Commission
Collections over 10.00	20 per cent Commission

4. That all expenditures in conducting the collections by way

of record files, all paper, envelopes, stamps, etc., shall be borne by the Attorney.

5. That said Attorney shall be appointed by the Committee for a term of one year subject, however, to removal by the Business Bureau or Society for unwarrented neglect, dishonesty or general incompetency.

6. That the Attorney shall arrange a reference list as to financial standing and responsibility of patients, accessible to members of the County Medical Society but to none others. This list together with such additional lists and information deemed justly the private property of the Society shall be turned over to his successor in case of withdrawal, dismissal, or for any other reason. The Attorney shall further furnish annually to each member of the Society in good standing, a reference list as indicated above—expense of printing and mailing said reference to be borne by the Society.

7. These articles and the power given the Business Bureau Committee may be altered or curtailed by a two-thirds vote of members present and voting at any regular meeting, previous notice of such actions having been given all members sixty days in advance.

Signed Chairman

Attorney

The foregoing, I am sure county medical societies will find helpful if they will but try our plan. It is working out in other cities and towns Mr. Secretary—why not in your own? We must recognize that the one thing needful in our profession today is better and saner methods for the collection of our bills! Give this to members through the society and you make the society a benefit to them. Give them a 'general county fee-bill not as a law, but merely as a sort of general guide to follow' and you will increase collections 12 per cent. Do this and the list containing the names of thousands of doctors, who do not pay their bills as compiled by the large drug and supply houses will be materially reduced. Physicians are an extremely industrious class, but too much of their earnings are never collected.

A CONTRIBUTION TO THE SURGERY OF ANTEFLEXION OF THE UTERUS.

H. MATTHEY, M. D., Davenport, Iowa.

The existence of anteflexion of the uterus results in the production of dysmenorrhea, vesical disturbances, possible sterility, and reflex nervous symptoms, and predisposes to various diseases of the uterus proper and of the adnexa.

Up to the present time no adequate and satisfactory surgical procedure had been devised to overcome this deformity. Dilatation of the cervix, curettement, massage and local applications were in the nature of an attempt to furnish relief. The suggestion of

*Read Before the Scott County Medical Society, July 13, 1911.

Condamin, to perform ventrofixation, was occasionally carried out, or in desperate cases the last resort was a resource to hysterectomy.

The flexion of the uterine canal obstructs the flow of menstrual blood, painful contractions seek to overcome this obstacle; the regularly recurring congestion is attended with a condition of irritation which extends to the adnexa, and what begins with hyperaemia ends in disease. Conception, if it occur at all, usually finds its termination in abortion.

My own experience with not an inconsiderable number of cases of antelexion has been on the basis of the usual treatment; and the results, while often temporarily gratifying, have lacked the desired permanency and reliability. In only one case in which sterility had existed during three years of marriage, dilatation and curettement led to a permanent cure, and pregnancy occurred. The occurrence of pregnancy doubtless contributed largely to the permanency of the result.

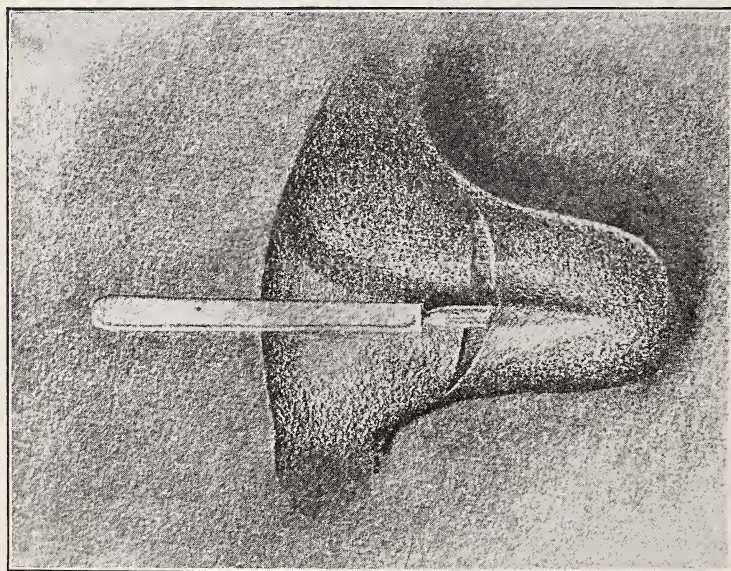
The angle of flexion sometimes attains a marked rigidity, as was shown in one case of intolerable dysmenorrhea. Dilatation and curettage had been twice performed, before the patient came under my care, and I felt convinced that neither operator had passed the angle of flexion. With great fortitude and patience this woman submitted to a prolonged course of treatment, which resulted in a reduction of the menstrual pain. This result was transitory, and I finally knew of no other suggestion than hysterectomy.

Very recently I operated upon a case in which I had performed dilatation and curettement nineteen years ago. At that time the patient was discharged cured of her symptoms; she married, but remained childless. This particular case was a striking example of the possible consequences of an enduring antelexion. The recent operation revealed, in addition to the antelexion which had persisted, a majority of the known diseases of the uterus and its adnexa; metritis, endometritis, fibromyomata, hydrosalpinx on the right and pyosalpinx on the left, purulent peri-metro-salpingitis, first-sized cysts of both ovaries, and aggravated bilateral varicocele in the broad ligaments.

The very general dissatisfaction attending the use of known operative methods induced me to apply, in cases of antelexion, the plan devised by Pestalozza for retroflexion. This procedure makes it possible for the surgeon to establish and maintain a physiological position of the uterus; perfect freedom of movement remains; and even in extreme cases, both ventrofixation and hysterectomy are supplanted. It is a justifiable assumption that, in the absence of destructive disease of the tubes, this method will remove sterility. It has the further advantages of establishing no obstacles to pregnancy and labor, and because it restores anatomical and

physiological normality it prevents the detrimental changes underlying the development of uterine and adnexal diseases.

The technique is simplicity itself. Dilatation and curettement are followed by laparotomy. The uterus having been drawn upward by an assistant, is incised transversely about the middle of the posterior surface. The incision is carried from side to side and deeply enough to include the serosa and its immediately subjoining muscle fibres. This sero-muscular plate is now undermined downward by means of a Kocher director, in such a way that a flap is formed which remains attached to the lower uterine segment by its inferior and two lateral borders. Catgut sutures are then introduced in a row from above downward in such a manner that each strand after passing through a segment of the fundus enters and passes through the separated flap about 1-4 inch from its margin. The flap must be of ample size and the sutures sufficiently numerous to

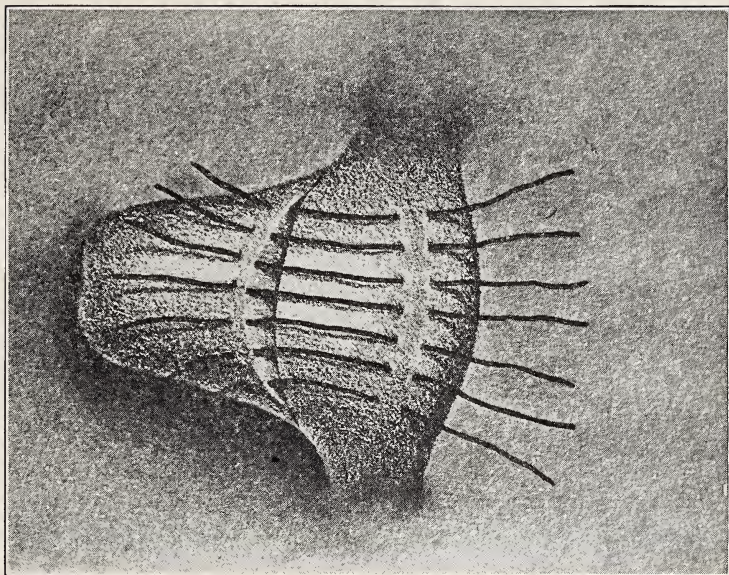


Line of Incision and Separation of Serosa

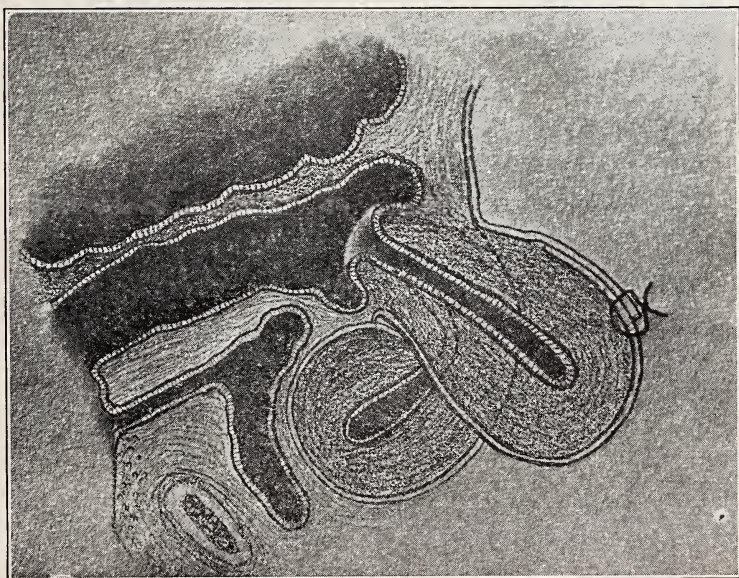
bring about a coaptation which shall fix the uterus in a normal position. A light scarification of the serous covering of the upper segment may advantageously precede the tying of the sutures. This insures immediate and durable fixation. Accompanying pathological conditions must of course receive appropriate attention.

The case selected by me for the first application of this method was a 37 years' old virgin, who had, in consequence of an anteverted uterus suffered since puberty from dysmenorrhea, vesical disturbances and reflex nervous symptoms. The operation, performed as already outlined, was supplemented by the partial ablation of cystic ovaries. The results of this procedure were gratifying beyond all expectations. Every symptom vanished.

Introduction of Sutures Through Fundus and Layer of Separated Serosa



Position of Uterus After Sutures Have Been Tied



No positive statements can as yet be made concerning the general value of this operation, for in this particular case the partial resection of the ovaries will raise the question whether this feature or the correction of the ante flexion had the greater share in the results. For this reason it is necessary to await corroboration from other sources.

Future experience must decide also whether an early operation of this character will definitely ward off the development of dysmenorrhea and sterility. The fact, however, remains that the procedure is theoretically correct, since the nature of the technique makes the restoration of position permanent.

Table of Comparative Membership for Five Years.

First District:	1907	1908	1909	1910	1911
Washington	10	20	23	24	26
Jefferson	15	17	17	15	14
Henry	19	20	19	20	21
Lee	43	44	44	40	40
Louisa	3	4	3	3	9
Van Buren	23	28	22	23	12
Des Moines	28	26	30	32	35
Total	141	159	158	157	157

Second District:

Scott	40	56	47	60	57
Muscatine	31	25	26	26	25
Clinton	29	30	31	36	12
Johnson	25	30	29	31	46
Jackson	22	21	19	22	17
Iowa	14	19	15	18	18
Total	161	181	167	193	175

Third District:

Dubuque	33	43	49	52	49
Delaware	14	14	13	14	14
Buchanan	17	23	20	20	21
Wright	14	17	16	19	19
Bremer	14	18	12	4	12
Hardin	31	27	31	30	30
Franklin	9	11	10	11	10
Blackhawk	51	45	41	42	40
Butler	12	10	11	11	16
Total	196	208	203	203	202

Fourth District:

Clayton	20	18	10	15	00
Allamakee	13	12	15	13	14
Winneshiek	18	17	15	14	12
Fayette	9	9	18	19	7
Chickasaw	15	16	13	21	20
Howard	10	10	10	10	9
Floyd	16	15	17	11	14
Mitchell	9	8	9	9	6
Worth	8	8	8	8	7
Cerro Gordo	32	32	30	31	24
Total	150	145	165	151	113

Fifth District:

Cedar	13	17	19	15	17
Jones	23	22	22	22	19
Linn	50	60	54	57	43
Benton	16	19	24	24	21
Tama	13	15	16	20	16
Grundy	5	5	9	12	11
Marshall	27	26	28	26	26
Total	147	214	172	176	153

MEMBERSHIP ROLL

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Sixth District:

Davis	12	17	10	12	8
Wapello	38	44	47	52	46
Monroe	19	18	17	22	21
Keokuk	13	16	18	22	20
Mahaska	19	19	23	22	21
Jasper	20	21	23	24	15
Powsheik	17	15	17	25	22
Total	138	150	155	179	153

Seventh District:

Marion	29	32	33	27	24
Warren	20	12	12	9	10
Madison	12	11	7	11	10
Story	21	24	24	22	21
Polk	90	102	95	102	137
Dallas-Guthrie	23	36	32	36	25
Total	195	217	203	207	227

Eighth District:

Adams	10	10	12	12	8
Union	17	14	15	19	18
Clarke	10	11	9	10	00
Lucas	10	13	11	13	15
Fremont	14	12	15	13	14
Page	23	26	17	23	26
Taylor	13	11	12	11	14
Ringgold	9	10	8	12	10
Decatur	14	10	13	14	11
Wayne	11	14	11	13	12
Appanoose	24	22	22	27	22
Total	155	153	145	167	150

Ninth District:

Mills	18	16	15	22	20
Montgomery	20	17	19	16	12
Adair	12	14	12	12	8
Cass	16	17	17	18	22
Pottawattamie	43	42	42	40	38
Harrison	23	23	25	22	20
Shelby	9	9	11	9	6
Audubon	4	4	8	7	9
Total	145	143	149	146	135

Tenth District:

Crawford	13	12	12	12	5
Carroll	21	24	25	25	18
Greene	10	9	7	7	6
Winnebago	11	10	8	4	5
Boone	23	23	28	24	27
Hancock	10	10	8	7	8
Hamilton	13	16	13	16	18

Webster	13	25	24	20	28
Calhorn	19	18	16	13	11
Pocohontas	11	12	14	13	8
Humboldt	9	9	8	9	5
Kossuth	12	14	16	17	8
Palo Alto	12	16	16	00	00
Emmet	10	9	12	12	10
Total	187	212	207	177	157

Eleventh District:

Monona	5	14	18	18	16
Woodbury	52	52	56	65	38
Ida	13	12	13	17	17
Sac	7	8	9	5	9
Buena Vista	15	14	16	15	21
Cherokee	21	10	13	15	14
Plymouth	22	18	5	12	9
O'Brien	17	18	15	15	16
Sioux	22	8	14	11	9
Clay	12	13	10	10	11
Dickenson	13	11	7	8	8
Lyon	7	11	9	11	10
Osceola	8	7	10	10	8
Total	213	196	195	202	186
GRAND TOTAL	1828	1978	1919	1958	1808

 DIRECTORY FOR DISTRICT SOCIETIES.

The Association wants to receive programs, reports and other data from the Secretaries of the District and County Societies. It is planned to make this department of value to the component societies. In case of deaths among the membership, send in an appropriate biography for publication in the next issue. Address the Associate Editor at Washington.

Southeastern District Society meets in Washington November 16, 1911. C. A. Boice, President; E. Frank LaForce, Secretary, Burlington.

Second District Society meets second Tuesday in October in Davenport. D. N. Loose, President; J. V. Littig, Secretary, Davenport.

Iowa Union Medical Society meets fourth Tuesday in June and second Tuesday in December, in Cedar Rapids. D. C. Brockman, President; F. G. Murray, Secretary, Cedar Rapids.

Des Moines Valley Medical Society meets in Ottumwa the third Thursday in June. A. O. Williams, President; F. W. Bowles, Secretary, Ottumwa.

Austin Flint-Cedar Valley Medical Society. J. C. Powers, Hampton, President; E. E. Dunkleberg, Vice-President; C. F. Starr, Secretary, Mason City. Next meeting in Waterloo.

Northern Iowa Medical Society meets third Thursday of April and October. L. H. Jones, President; G. W. Murphy, Secretary, Danbury.

Southwest Iowa Medical Society meets first week in October in Osceola. F. C. McClure, President; Enos Mitchell, Secretary, Osceola.

Iowa and Illinois Central District Medical Association meets alternately in Davenport and Rock Island on the second Thursday in January, April, July and October. H. M. Decker, President; L. W. Littig, Davenport, Secretary.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

D. S. FAIRCHILD, M. D.....Clinton
EDITOR

C. A. BOICE, M. D.....Washington
ASSOCIATE EDITOR

Vol. 1.

Clinton, September 15, 1911.

No. 3

Typhoid Bacilli Carriers.

HENRY ALBERT, M. D., Iowa City, Iowa.

There is at the present time, I believe, no problem of public health work that deserves more serious consideration than the methods of preventing the spread of typhoid fever.

We have all, I am sure, often wondered at the source of infection of isolated cases, and at times of endemics and epidemics of this disease. We have for some time known that typhoid bacilli are excreted by a typhoid fever patient, probably in all cases with the feces and in about 25 per cent. of all cases with the urine. In some instances they are also excreted with the sweat, saliva, nasal secretions, etc. We had thought that they disappeared with, or soon after, the convalescence of the patient and so have been inclined to blame the privy vault and soil for all cases that could not be explained as coming from the water or through it, the milk supply or contact with existing cases.

We are beginning to learn and appreciate the importance of "typhoid bacilli carriers"—individuals who continue to excrete typhoid bacilli with the feces and urine for days, yes months, even years, (in one instance as long as fifty-two years) after recovery from the disease. Not only people who have had the disease, but many who have never had it may become carriers. We have known for some time that in typhoid fever as in all other infectious diseases, the question of resistance has much to do with infection, i. e., not all exposed to, or who ingest or inhale pathogenic germs are infected; but that they should harbor the bacilli and continue to harbor and excrete them for long periods of time without being affected by them has come to our knowledge only during the past few years.

The majority of typhoid fever patients con-

*Read in Section on Preventive Medicine, 60th Session, Iowa State Medical Society, May, 1911.

tinue to excrete typhoid bacilli for some time after clinical recovery. It has now become quite generally agreed that those who cease to excrete typhoid bacilli within a period of three months after recovery, as indicated by normal temperature, from an attack of typhoid fever are to be regarded as temporary carriers, and those who continue to excrete them after a period of three months or longer, as chronic carriers.

Although Frosch called attention to the existence of typhoid bacilli carriers and the possibility of their transmitting typhoid fever in 1902 and Lentz in 1905 wrote an exhaustive article in which he mentioned a number of cases of typhoid fever traceable to such carriers, the first recognized striking example of the influence of a chronic typhoid bacilli carrier was reported by Kayser (7) of Strassburg in 1906. The person in question was a woman, the proprietress of a bakery, who had typhoid fever ten years previous but who still harbored the typhoid bacilli. Attention was called to her because of the fact that for several years almost all of her employees and apprentices and many of the people who took meals at her establishment contracted typhoid fever.

The following table represents the principal findings of a number of the more significant epidemics of typhoid fever traceable to typhoid bacilli carriers:—

SEE TABLE ON PAGE 103.

John B. Murphy, M. D—The physician or surgeon is not in competition with his fellow practitioner at all, but it is in competition with the average standard of the medical qualification of his time. This standard is the line dividing mediocrity and incompetency of varying degrees from knowledge and efficiency. He who keeps above the standard desires companionship. Therefore, if we elevate the ethical and educational average, we increase the brotherhood of the professional and enhance the percentage of efficiency to the public. The effect of capital and labor organization has been to lessen individual exertion and reduce men to a common or mediocre level—their decadence is inevitable. The ideal of medicine, on the contrary, must be the stimulation of individual exertion to the highest degree and the establishment of a standard, the attainment of which should be the one great desire of every member of our profession, each to assist the other in his upward progress. Advancement is retarded by the failure of the individual to utilize time and avail himself of opportunity. We are all spendthrifts of time; all overlook great opportunities. Many are ruminants on their imaginary disadvantages in the contest: these never became producers. The demand of the times is that we level every opposition and make smooth the way for general progress, enlightenment, education and the higher ethical obligations. The individual is responsible for his own position and to a limited but positive degree for that of his fellow practitioner. When given a diploma from a medical school or a license to practice, we are all supposed to be equal. But no insignia makes men equal in medicine more than in any other line of human endeavor. By their superior intellectual qualifications, their fidelity to purpose and above all their indefatigable labor the few become leaders. American progress has been made the admiration of the world. The American medical profession has sustained the statements which Emerson made for American scholars, in his Cambridge address, in 1837: "We walk on our own foundation, we work with our home trained hands; we think with our free-bred courageous brains, and over all we execute with a power of art, admired and imitated by the world."

Endemics and Epidemics of Typhoid Fever Traceable to "Typhoid Bacilli Carriers."

REPORTED BY	WHEN	NO. OF CARRIERS	SEX	OCCUPATION	LENGTH OF TIME BETWEEN ATTACK OF TYPHOID FE- VER AND TIME CARRIER CONDITION WAS DISCOV.	NEVER HAD TYPHOID FE- VER AS FAR AS KNOWN	CASES OF TYPHOID TRACEABLE TO CAR- RIER.		FECES	URINE
							NO.	DURING WHAT TIME		
Albert & Gunn 1....	1907	1	M	Milker	1 yr.		13			X
Albert & Hudson ...	1911	2	M	Heads of family	2 yts.		2			X
Albert & Painter ...	1910	1	M	Milker	4 mos.		60			X
Friedel 2	1906	1	F	Kitchen work..		X	70			
Gregg 3	1908	1	F	Boarding H'k.	52 yts.		7	3 yts.	X	
Huggenberg 4	1908	1	F	Housekeeper ..	31 yts.		13	3 yts.	X	
Johnstone 5	1910	1	M	Milker			230	17 yts.	X	
Jundell 6	1909	1	F	Housekeeper ..		X	22	54 yts.	X	
Kayser 7	1906	1	F	Prop. bakery ..	10 yts.		Many		X	
Kayser	1906	1	F	Milk trade ...			17		X	
Kossel 8	1907	1	M	Milker		X	00		X	
Levy & Kayser 10...	1907	1	F	Inmate asylum	3 yts.		00		X	
Lumsden & Woodward 11	1909	1	F	Milker	18 yts.		50		X	
Ravanel & Smith 13.	1909	1	M	Wash dishes ..		stage of incub.	40			
Roscoe 14	1909	1	F	Inmate asylum	17 yts.	X	12	14 yts.	X	X
Scheller 16	1908	1	F	Milker			32	7 yts.	X	
Soper 17	1907	1	F	"Typhoid Mary	under	X	26		X	
Southworth 18	1907	1	F	Child 16 mo ..	1 yr.		4			

Permit me to call particular attention to a few of the more interesting of these outbreaks:—

In the fall of 1907, there was an out break of thirteen cases of typhoid fever in three families of a certain community in Cedar Falls, Ia. The water used by these people was from the general city supply. All of these used milk from one source and theirs were the only families that obtained milk from this source. It was quite obvious therefore that the outbreak was due to this milk supply. Investigation showed that the man who did the milking had had typhoid fever one year previous and examination revealed the presence of typhoid bacilli in his urine. Hexamethylenamin was administered, the bacilli could not be found for some time but one year later when several cases of typhoid fever again occurred among students boarding at his house, examination again showed typhoid bacilli to be present in his urine. He was ordered by the local authorities to discontinue the maintenance of a boarding house.

In the autumn of 1910, we examined specimens of urine from ten members of a family and found typhoid bacilli in seven of them. Of the seven,—I am informed by the attending physician,—Dr. Loose of Maquoketa, Ia., two gave a history of severe prolonged illness (which was probably typhoid fever) within two years; two had just recovered from severe attacks of the disease and three had never presented symptoms suggestive of such. The water supply was apparently free from pollution.

During the months of January and February 1911, there occurred about 80 cases of typhoid fever in Oskaloosa, Ia. Most of these cases were fairly definitely traceable to a person in the country who had had typhoid fever four months before and who did some of the milking. The milk was sold to a central milk depot in the city. Typhoid bacilli were found in his urine.

The most remarkable case as regards the duration of the "carrier" condition is the one reported in 1908 by Gregg (3). Seven cases of typhoid fever had occurred among the customers of a boarding house in Massachusetts between July, 1906, and April, 1908. An investigation revealed the fact that the keeper of the house had had typhoid fever in 1856—52 years previous. During the time that these seven cases occurred no other cases of typhoid fever were known to exist in the city. The water and milk supply were the same as that was used in the greater part of the city. An examination of the house-keeper's feces revealed typhoid bacilli in considerable number. The woman gave no history of any second attack of the disease. It is presumed therefore that she has been a carrier for 52 years.

The largest number of cases of typhoid fever traceable to a single carrier has been reported by Johnstone (5) of England. The

carrier was employed as a milker on several farms in succession. Milk from these farms was supplied to people in the city of Folkestone and vicinity. Typhoid fever appeared in turn among the customers of milk from different farms corresponding to the places on which the man worked. During the period 1893-1909, it is figured that 230 cases of typhoid fever were attributed to this carrier which represents 64 per cent of the cases of typhoid fever of that city. The number of cases annually varied from a few to 68 (1899).

Ravenel & Smith (13) report an unusual outbreak of 40 cases of typhoid fever occurring among the students of the University of Wisconsin, traceable to a carrier who during the stage of incubation of that disease was engaged in washing dishes in a boarding house.

Scheller (16) refers to an estate in Prussia in which typhoid fever was endemic for 14 years, during which time 32 of the 180 people living on the estate contracted the disease. On investigation it was found that a woman who had for 14 years been employed in the dairy had typhoid fever 17 years ago or three years before she began her service on the estate. It was also found that typhoid bacilli were present in her stools in almost pure culture. At the time of the investigation, an examination of the urine and feces of all the healthy people, 40 in number,—who were then using milk from the estate dairy was also made and revealed the fact that 18 of them were bacilli carriers and that only five of these 18 had ever had typhoid fever. Of these 18 carriers, 10 were found to contain the typhoid bacilli in their feces, and 10 in the urine,—four having them in both the feces and urine. The feces and urine of 30 persons on the estate who did not get their milk from the estate dairy were also examined, but no typhoid bacilli were found. All of the bacilli carriers were given a course of treatment with hexamethylenamin. After a month's treatment, no typhoid bacilli could be found in the discharges from any of the carriers except the original carrier, in whom they persisted, despite all efforts at their removal.

One of the most interesting cases reported in America is one by Soper (17) concerning a woman, who, as a cook had during a period of seven years, transmitted typhoid fever to 26 persons in seven out of eight different families in which she had worked from 1900 to 1907. In almost every instance the disease occurred in the family within a few weeks after her arrival. The case was brought to light by an investigation of a household epidemic of typhoid fever which occurred in Oyster Bay, N. Y., during the latter part of August, 1907. Six out of eleven members of the household were affected. Indirect evidence showed that she probably had a mild attack some years before. Believing that she was a menace to the

public health she was taken in charge by the New York City Department of Health. "Typhoid Mary" as she has been called continued to excrete large numbers of typhoid bacilli with her feces for several years.

A study of this table enables us to formulate certain general conclusions:—

1—Altho a study of a large number of statistics shows that there are more male than female typhoid carriers it is to be noted that about 75 per cent. of all the carriers responsible for the appearance of typhoid fever in others, are women.

2—Almost without exception the carriers who have been responsible for transmitting the disease to others have been people who have either been engaged in some occupation as baker, cook or handler of milk, which has enabled them to transmit typhoid bacilli to substances used as food by others—or who, such as children or inmates of insane asylums, are careless about their personal habits. Simonds examining the records of 33 carriers concerned with the transmission of typhoid fever finds that 13 of them were dairy workers; 9 cooks; 7 house-wives and 3 laundresses.

3—Carriers responsible for the disease in others have in some instances had the disease but a short time previous—in others as long as 10, 30 and even 52 years.

4—Carriers who have never had typhoid fever, so far as known, have been responsible for a number of severe epidemics of the disease.

5—Endemics of typhoid fever traceable to a given carrier, have extended over long periods of time—in one instance, 54 years.

6—Typhoid bacilli carriers may excrete the germs with the feces or urine or both. Most frequently they have been found in the feces alone. This raises the question as to the source of the typhoid bacilli.

It is quite certain that they may multiply in the urinary bladder. It is possible, also to conceive of the retention and multiplication of the bacteria in the various folds and pockets of the gastrointestinal canal, more especially in such blind pouches as the appendix. The gall bladder, however, seems to be the place where the typhoid bacilli develop most frequently and in largest number. So constantly have the bacteria been found in the gall-bladder of all cases of typhoid fever examined bacteriologically that it is quite probable that this organ becomes infested and we know, also frequently infected, in probably all cases of typhoid fever.

Marchildon (12) has recently pointed out that the source of typhoid bacilli of chronic bacilli carriers may come from infected seminal vesicles and prostate gland. He found these to be involved in two fatal cases of typhoid fever. In this connection it is of interest to note that Huet has shown that influenza of horses may

be transmitted to females after males have apparently recovered. He found by examining the seminal vesicles of some of the domestic animals that some which were apparently healthy had pathogenic bacteria in the vesicles. He also found that if animals were experimentally infected, bacteria could usually be recovered from the vesicles and occasionally only from such.

The finding of typhoid bacilli is the only positive evidence that we have of the existence of the carrier condition. A high opsonic index or a positive agglutination test is only of suggestive value. The value of bacteriological examinations is considerably diminished by the observation that the bacilli are often excreted intermittently—there being intervals when no typhoid bacilli can be found. Another difficulty arises from the fact that typhoid bacilli soon die when left in fecal material, so that it is impracticable to send specimens very far for examination. Nevertheless, where facilities are available, the laboratory may be advantageously employed, to determine the cessation of the carrier condition.

A large number of examinations have been made to indicate the danger of typhoid bacilli carriers to the public health. I have collected some of these and considered them under the following heads:—

1—The proportion of cases of well recognized typhoid fever which become carriers. Lentz examining 400 cases found that 4.5 per cent. excreted typhoid bacilli for more than ten weeks after recovery and 3 per cent. for more than 13 months after recovery. Klinger examining 482 cases, found typhoid bacilli in the excretions of 1.7 per cent. 6 weeks after recovery. Semple & Greig making daily examinations of 86 cases, found that 11 per cent. excreted typhoid bacilli for more than 6 weeks after recovery. Frosch examining 6,708 cases found that 2.1 per cent. of these were temporary carriers, i. e., did not excrete them beyond a period of 3 months after recovery and 2.5 per cent. were chronic carriers, i. e., continued to excrete them for more than 3 months. Prigge examining 10,481 cases, found that 3 per cent continued to excrete them for more than 1 year; Kayser examining 200 cases found that 3 per cent and Bruckner examining 316 cases found that 3.8 per cent. continued to excrete them for more than 1 year after recovery. Taking the average of these figures it may be stated that about 5 per cent. of all cases of typhoid fever continued to excrete typhoid bacilli for at least three months after recovery and that 3 per cent are found to continue to excrete them for more than one year after recovery.

2—The proportion of carriers who have never had—so far as known—an attack of typhoid fever. Klinger examining 1,700 persons closely associated with typhoid fever, found that .009 per cent. became temporary carriers without developing the disease.

Prigge examining 10,841 persons found 35 carriers among them; of these 27 had previously had typhoid fever and 8 gave no history of having had typhoid fever. Klinger found that 56 per cent. of 211 cases of temporary carriers and 20 per cent. of 220 cases of chronic carriers gave no history of typhoid fever. It is therefore to be noted that when persons who have not had typhoid fever become carriers they are more prone to be of the temporary than of the chronic type. It appears from statistics that fully one-half of all temporary carriers have never had typhoid fever, so far as known.

3—Proportion of the general population who are carriers. There occur annually about 200,000 cases of typhoid fever in the United States; if 3 per cent of these become chronic carriers and remain so for three years, it would mean that there are 18,000 carriers all the time; if we add to it, 1-4 that number, representing chronic carriers who give a history of typhoid fever, we have 22,500. It is probable that there are constantly fully as many temporary carriers as there are chronic ones which would give us a total of 45,000. The population of the United States last year was slightly more than 90,000,000. According to such figures one out of every 2,000 people is a typhoid bacilli carrier. Menilli found one carrier among 250. Rosenau, Lumsden and Castle found 3 carriers out of 993 healthy people living in a certain block of the average type in Washington, D. C. Such figures would seem to indicate that one out of every 500 people of the general population is a typhoid bacilli carrier. To be conservative let us place it at 1 : 1000.

4—Proportion of cases of typhoid fever traceable to carriers. Kayser traced 9.5 per cent of 505 cases to bacilli carriers; Forster, 20 per cent. of 386 cases; Schumacher, 26.6 of 45 cases and Mayer, 32.3 per cent of 495 cases; Frosch investigating 2080 cases was unable to learn of the source in 53 per cent. but traced 5 per cent. of the balance, the source of which was definitely known, to bacilli carriers. It is probable that a considerable higher proportion of the cases, the sources of which is not known, may have resulted from bacillus carriers. It would seem from these figures that at least 10 per cent of all of our cases of typhoid fever may be traceable to carriers. Germans who have recently studied the subject very carefully believe that they are the source of the majority of our cases of typhoid fever. If such were the case it would seem that cities which have witnessed severe epidemics of typhoid fever due to causes that did not appear before nor after such outbreak should have a considerable larger number of cases of typhoid fever after than previous to the outbreak. Statistics, however, from several places would not seem to bear out such conclusion. The typhoid bacilli of the carriers seem less virulent than those from persons affected by the disease. This, no doubt,

accounts for the fact that a relatively smaller number of cases of typhoid fever are traceable to contact with carriers than with those affected with the disease. The number of bacteria excreted by the carrier is often higher than from those affected with typhoid fever.

What may be done to prevent typhoid fever patients from becoming typhoid bacilli carriers, and typhoid bacilli carriers from giving the disease to others?

As remedial measures more or less applicable may be mentioned:—

1—The administration of hexamethylenamin. The administration of this substance in sufficiently large doses gives antiseptic properties to both the urine and the bile. Richardson has recommended the giving of hexamethylenamin as a prophylactic to all typhoid fever patients in doses of 30 grs. a day for ten days, beginning with the third or fourth week of the disease. Crowe has recently shown that when given in doses of 75 grains per day, it has a distinct influence in ridding the gall-bladder of contained bacilli. It has been found however that this drug cannot be depended upon to free carriers from typhoid bacilli. Soper's case received 100—150 grs. a day without the desired effect.

3—The feces and urine of typhoid fever patients should preferably be disinfected for at least 6 weeks after the patient has entirely recovered from the disease, just as during the period of illness.

3—The prohibition of persons known to be "bacilli carriers" from engaging in any occupation as cooking, baking, dairy work, etc., which may, from the articles handled, endanger the lives of others. This prohibition may well apply to all who have had typhoid fever, for a period of one year after recovery or until by repeated examinations, no typhoid bacilli can be found. If such precautions cannot be observed, it is exceedingly important that such persons should be carefully instructed as to personal cleanliness.

4—The isolation of chronic bacilli carriers in institutions such as insane asylums.

5—Operation in the nature of a cholecystotomy and drainage of the gall bladder or complete removal of that organ has resulted in a number of instances, in removing the source of typhoid bacilli. Such an operation may very properly be performed on patients such as the insane, where because of careless habits, they may transmit the disease to others. It may also be very properly performed on individuals who have symptoms pointing to gall bladder disease. The fact however that the gall bladder is not the only source of the typhoid bacilli of carriers and that there have been instances in which operation failed to remove the carrier condition together with the severity of the operation makes it impracticable to recommend it as a routine procedure.

6—The administration of typhoid vaccines has in several in-

stances been successful in freeing carriers from typhoid bacilli; in others, however, it appears to have had no effect.

Summary and Conclusions.

1—Chronic typhoid bacilli carriers must be regarded as a menace to the public health, it having been shown that probably:

a—Five per cent. of all cases of typhoid fever becomes chronic typhoid bacilli carriers.

b—Three per cent. of all cases of typhoid fever continue to excrete typhoid bacilli for more than one year after recovery.

c—Twenty-five per cent. of all chronic typhoid bacilli carriers have never had typhoid fever.

d—One in every 1,000 of the population is a typhoid bacilli carrier.

e—Ten per cent of all cases of typhoid fever are traceable to carriers.

2—Whenever there are household epidemics or a series of outbreaks of the disease in a locality or an institution or among soldiers in the field we should consider that a bacilli carrier is the most probable source.

3—If an individual has an attack of cholecystitis or biliary colic soon after an attack of typhoid fever, we should suspect that such has been caused by typhoid bacilli and that such a person is a typhoid bacilli carrier.

4—Chronic typhoid bacilli carriers transmit the germs to others, practically, only by the handling of articles of food, consumed without being cooked or handled after being cooked.

5—Persons who have recovered from an attack of typhoid fever should preferably not engage in an occupation such as dairying, doing kitchen work, etc., for at least one year after the attack.

6—Persons who have ever had typhoid fever or within a year been exposed to infection with typhoid fever should thoroughly wash their hands with soap and water before handling any article of food which is to be consumed without being cooked or reheated to the boiling point.

7—That the spirit of the rule of the Iowa State Board of Health namely "That no person in the state of Iowa who is known to harbor typhoid bacilli in the body, or in other words, to be a typhoid carrier, shall be permitted to handle milk or other dairy products offered for sale," may very properly be applied to all in whom there is a strong probability that they may be a typhoid bacilli carrier.

8—The administration of hexamethylenamin and typhoid vaccines and occasionally the performance of a cholecystotomy may be advantageously employed to remove the carrier condition.

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DISCUSSION.

W. L. Bierring, Des Moines: It seems to me that we should be impressed by this interesting paper in several ways. First, in the citation of the different cases of definite carriers, with the peculiar longevity of the typhoid bacilli in the human body, some of these living for years; and one wonders in just what way they keep up this vitality—whether they really undergo growth or multiplication, or whether they are naturally subject to this long period of life in the human body. That the gall bladder seems to be an especially good habit for the growth of life of typhoid bacilli is a part of all these observations. On the other hand, one wonders to what extent convalescents from typhoid really become dangerous as carriers. If we recall the many cases that pass out from under our hands, and in which we are not able to keep up the urotropin or other modes of disinfection, and still we have very few instances of subsequent infection occurring in the neighborhood or environment of these patients. Evidently anti-bodies are formed in the body which gradually reduce the virulence and vitality of the typhoid bacilli while retained in the system, and when discharged with the excreta, there are influences existing outside of the body which in a sense are protectors. As cited in the paper of the chairman of the section, undoubtedly a great many of the pathogenic organisms, as soon as they get outside the body, lose much of their vitality. The solution of this problem presents many difficulties, and undoubtedly it will be one of the problems for sanitarians to solve for a long time to come. Yet, we all endorse, as representing the spirit of the State Board of Health, the rule, that all typhoid fever patients who are convalescent should be kept under observation for a certain time, should be given the benefit of urotropin and such other methods as seem to disinfect the tracts or channels where these germs are harbored, and especially by coming in contact with those persons who are known to be carriers of typhoid.

D. N. Loose, Maquoketa: The importance of this paper certainly cannot be over-estimated. In regard to my own experience to which Dr.

Albert referred, I of course was surprised to find that I had seven typhoid carriers in a family of ten.

T. F. Duhigg, Des Moines: I don't like to discuss such an important matter on such short notice. I want to compliment the essayist on his list. I see one important point in it: the reference to a dishwasher as the source of infection of forty other cases which occurred in the boarding-house within a few days. I don't know why the dishwasher should be convicted of infecting the other forty, because in the absence of proof to the contrary it is reasonable to suppose that the other forty got it from the same source that she did. My sympathies are with the dishwasher.

As the paper under discussion is on typhoid carriers, however, that leads us to the general proposition of preventive medicine. It is perfectly obvious, it seems to me, that typhoid bacilli under certain conditions do live for a considerable length of time outside the body. They have been recovered from ordinary earth, where it was dry enough to pulverize and by action of a gust of wind would form dust. From that cultures of typhoid bacilli have been recovered after a period of two weeks. Bacilli have existed in certain soil, being nurtured on pollution and in tests have stood up and answered roll call in over three hundred days after they were planted.

Now, it is a well-established fact that in years when the water level is extremely low we have the greatest number of typhoid fever cases. Last year the government report showed that the Mississippi river was lower than it had been for forty-five years, and the health reports from the Mississippi valley indicated excessive typhoid fever. Here very able men laid it to the water supply. I believe myself it was due to that, and I think it was so also in other cities; and it is unreasonable to trace every case of typhoid fever to a carrier, and it is unreasonable also to expect a bacillus to die promptly unless he is kind enough to lie in the sunlight and exhibit himself. Where there are a multitude of destroying organisms, obviously he will disappear very rapidly; but a low water level and a polluted soil will sustain typhoid bacilli for a considerable length of time.

Dr. Albert: (Closing), It is quite probable that with the large number of cases of typhoid fever, if they all become common carriers, either for a short time or a longer time, we should have many more cases of typhoid fever. It is known that as between the carrier and the patient who has typhoid fever, the patient is a much more dangerous source of infection—not because the typhoid fever patient excretes more bacilli, because it has been shown that often the number of bacilli excreted by the patient is far less than that excreted by the carrier, but it has been shown that with the prolonged residence of the bacillus in the body without actually producing disease it loses its virulence to a very large extent, and I have no doubt the fact that there are not a larger number of cases due to the carriers is because of this lessened virulence.

The question very naturally arises as to the value of examination of faeces and urine to determine the presence of bacilli and perhaps the advisability of quarantine. The Massachusetts State Board of Health has taken steps in regard to that, and has made a general ruling that an examination of faeces must be made and found negative before the patient can be released from quarantine. However, the results of bacteriological examinations of the faeces in many cases are negative, because the typhoid bacilli die very rapidly in the faeces, while in the urine they live a long time. It is quite different with the bacillus of diphtheria.

**PROPER REGISTRATION OF VITAL STATISTICS.
BIRTHS, STILLBIRTHS, DEATHS, MARRIAGES, DIVORCES,
SICKNESS.**

G. H. SUMNER, M. D., Des Moines, Iowa.

SECRETARY STATE BOARD OF HEALTH.

Every individual has a reasonable right to demand that his or her birth, death, marriage or divorce (should there be a marriage or divorce) shall be properly recorded somewhere besides in the Old Family Bible, for in many instances the absence of such record works a great hardship, besides inconvenience and hardship in many instances similar to the two cases which I shall relate and which are said to have actually occurred. A young man and wife came from Switzerland and settled in a nearby state. They were hardy, honest and industrious. They settled in the County of Switzerland, doubtless being attracted by the name of their homeland. In the course of time a baby girl came to brighten their home. The father being thrifty and intelligent, was soon made a foreman in a saw-mill. When his child was about two years old, the father was accidentally killed by a log rolling over him. Time had not been sufficient for him to accumulate property, hence the wife struggled with wash-tub and needle to earn a living for herself and child. One day the news came that a brother of the father, the child's uncle in Switzerland, had died leaving \$12,000 to the issue of his brother. Great was the rejoicing which, on account of the neglect of the physician to record the birth, was to become bitter sorrow. Before the Swiss Government would turn over the property, it must have proof that the little child was the issue of the dead man. Neighbors knew of the birth of the child but could not testify except as to their belief of the fatherhood. The testimony of the mother was not admissible in her own country for she could lead any child into court and declare any man to be the father. It was the physician's birth certificate, made at the time of the birth and presumably in the presence and by the authority of the father, that the law demanded. It could not be produced, and the helpless infant that the **PHYSICIAN SHOULD HAVE BEEN EAGER TO PROTECT AND SERVE**, lost its inheritance. What a cruel and unnecessary blow was this from the hand of a practitioner of the learned and benevolent science of medicine! Surely a physician's duty to the families he serves and to the helpless infants is not fully performed until he has made out a Certificate of Birth and taken reasonable care that it is made of due legal record. Another incident is related of a farmer who

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left his valuable estate in trust of his unthrifty son, to go to his granddaughter on her twenty-first birthday. The girl had been told that the date of her birth was on a certain day of the month and year; and always celebrated the day as her birthday. The time came when she believed she was twenty-one, and therefore claimed her inheritance. Her father denied her age, saying she was only nineteen. The family bible was appealed to, but the leaf containing the family record was gone. No birth record had been rendered and the attending physician was dead. The Court was in a quandary. A Solomon was needed for judgment. At last a neighbor remembered that a valuable cow belonging to the grandfather had given birth to a calf on the day the girl was born, and he could swear to it. Perhaps the grandfather had recorded the date of the birth of the calf. His farm books showed this to be the case. The date of the birth of the human being was established.

What has been related regarding births is essentially true of the other Departments of Vital Statistics. It is as necessary that all stillbirths and deaths be reported in order that the proper tables of mortality may be made. These tables are essentially useful in studying all Public Health measures; and without them, we are like one traveling on a road with no guide-posts.

Marriages and divorces should also be properly recorded, for, in many instances a lack of proper records leads to serious complications as in cases of improper records of births.

Another important department of Vital Statistics is the proper recording of prevailing contagious and infectious diseases, for with such information at hand, Boards of Health are enabled to take active measures to prevent the spread of such diseases. It should be stated in this connection that the number of COMMUNICABLE DISEASES TO BE REPORTED TO THE STATE DEPARTMENT OF HEALTH should be amplified and made to include the following: Anterior Poliomyelitis, Anthrax, Bubonic Plague, Cancer, Cerebrospinal Meningitis, Chickenpox, Cholera, Diphtheria, Hydrophobia, Leprosy, Measles, Ophthalmia Neonatorum, Pellagra, Pneumonia, Scarlet Fever, Smallpox, Tetanus, Pulmonary or Laryngeal Tuberculosis, Typhoid Fever, Typhus Fever, Whooping Cough and Yellow Fever.

Referring again to births: If society is to continue, it must be recruited by births. While our population is increasing by immigration, if we are to have a healthy growth, the number of births must exceed that of deaths, hence the early notification of births is essential. The total number of births in a state or a city furnishes the basis of that important ration known as Infant Mortality. The full measure of protection to infant life can not be given unless all births are promptly reported.

If we are to obtain accurate statistics of births, it is necessary

that every birth should be properly reported for record. Upon a proper record of Vital Statistics therefore depends the prosperity and health of all States and Nations. It is the most important of all departments of Public Health Boards and should be the most liberally provided with funds for the carrying on of the work of proper registration and reports. Vital Statistics is the complete registration and tabulation of the population, marriages, births, disease, deaths and divorces, coupled with this, the full analyses of all the resulting illustrations with the purpose in view to examine thoroughly the path of Sanitary Progress.

It was that genuine philosopher and statesman, Benjamin Franklin, who said, "Public Health is Public Wealth." The truth of this statement cannot be disputed and it is to be hoped that our present statesmen will become enthused with these true economics to the extent that needed legislation will be enacted for improving the present Public Health measures.

Disraeli said, "The care of the Public Health is the first duty of statesman." Gladstone said, "In the health of the people lies the strength of the Nation," and only a short time since, the New York City Board of Trade passed unanimously, a resolution which reads as follows:

"Resolved, that the health and protection of life are more precious to the people and more necessary to their happiness than even the extension of our Commerce, the fostering of our Agricultural Interests, the solving of our Financial Problems, the cheapness or efficiency of our Postal Service, the importance of improving our rivers and harbors or the enlargement of our Navy."

The men who gave utterance to these statements were practical, successful business men who have accomplished much, and were not physicians or sanitarians. It must be acknowledged however, that the teachings of the Medical Profession have always been in accord with the resolutions now so universally adopted.

The conclusion is, therefore, that the importance of Vital Statistics to the family, the State and to medicine, can hardly be over-estimated. The physician is, except in instances, the only member of society who can supply information in regard to causes of death and the presence of Infectious Diseases; and a physician should remember when reporting Vital Statistics that he is giving obedience to the statutes of Iowa, on which he depends for protection; and that he is protecting the innocent and helpless, thus doing a general good and serving the profession to which he belongs and which he should delight to honor.

DISCUSSION

A. C. Moerke, Burlington: As far as the vital statistics question is concerned, I am not very conversant with the subject, for the reason that that is a department which does not come directly under the Board

of Health, but the Secretary is the head of it, and we only learn about it incidentally from what he tells us and what we observe.

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As Dr. Sumner said, once upon a time a birth record was established. This was along the lines that the U. S. Census Bureau had laid down. I myself at the time believed, and do believe now, that the record was too cumbersome, as far as the physicians were concerned. It could have been made much more simple and just as effective or more so.

One of the requisites in that birth certificate was that the name of the child be given. Now, at the time of the confinement you took the birth certificate along and filled it out, but the uncles and aunts, brothers and sisters had not agreed on a name, and if the case was out in the country five or six miles, frequently you had to drive or ride out there to get that name, as the certificate had to be sent in within a certain time. Another thing was the expense of recording these births and deaths. The state kicked on the expense. I don't exactly recall what the total expense to the state was, but it was quite a sum of money. Of course the state would not have kicked it if it had been for recording pigs and cows and horses, but the child is not worth as much as the blooded animal; and the Legislature revoked that law, not because of the work that the physician was doing for nothing, but because it cost the state too much. Now, the man who got the money was not the man who really did the work. The physician who made out the birth certificate and sent it in didn't get anything, but the man who wrote the name in the book got 25 cents.

The question has frequently been raised that the physician should be compensated for making this record. I must disagree on that point. The practice of medicine is not a right, but a privilege granted by the state, and I think for the privilege that is granted the physician to practice medicine in the state, he should be willing and anxious to report, for his own benefit, the deaths in the state. There are states that do pay 25 cents for the report, but I believe the physicians should be and are interested enough to make it without compensation, if the method is made less cumbersome than it was. I believe the state should furnish postal cards large enough to hold the data and mail them to every physician, and have a central depot in every county where they could be secured. These cards could be carried in the obstetric grip or pocket-book. Then, just as soon as the physician it through with the confinement, he could fill out this blank as far as possible and leave it with the family to fill in the name of the child and mail it in. With that we would have a pretty good record.

Dr. Sumner: (Closing), I do not believe I have anything further to offer, except that I would be very glad to receive from the members of this Association and the medical profession at large at any time any communication relative to this matter, whereby we may be able to better the department and aid you in your work; and we would be glad to give you a page or two pages in the bulletin of the State Board of Health at any time, if you will take the trouble to communicate with us.

Maurice H. Richardson, M. D.—The more I consider the question of reasonable accuracy in the diagnosis of breast tumors, and the larger my experience becomes, the more I am inclined to advise operations on all breast tumors, whether the diagnosis points toward malignancy or not, provided the patient is of the cancer age.

accounts for the fact that a relatively smaller number of cases of typhoid fever are traceable to contact with carriers than with those affected with the disease. The number of bacteria excreted by the carrier is often higher than from those affected with typhoid fever.

What may be done to prevent typhoid fever patients from becoming typhoid bacilli carriers, and typhoid bacilli carriers from giving the disease to others?

As remedial measures more or less applicable may be mentioned:—

1—The administration of hexamethylenamin. The administration of this substance in sufficiently large doses gives antiseptic properties to both the urine and the bile. Richardson has recommended the giving of hexamethylenamin as a prophylactic to all typhoid fever patients in doses of 30 grs. a day for ten days, beginning with the third or fourth week of the disease. Crowe has recently shown that when given in doses of 75 grains per day, it has a distinct influence in ridding the gall-bladder of contained bacilli. It has been found however that this drug cannot be depended upon to free carriers from typhoid bacilli. Soper's case received 100—150 grs. a day without the desired effect.

3—The feces and urine of typhoid fever patients should preferably be disinfected for at least 6 weeks after the patient has entirely recovered from the disease, just as during the period of illness.

3—The prohibition of persons known to be "bacilli carriers" from engaging in any occupation as cooking, baking, dairy work, etc., which may, from the articles handled, endanger the lives of others. This prohibition may well apply to all who have had typhoid fever, for a period of one year after recovery or until by repeated examinations, no typhoid bacilli can be found. If such precautions cannot be observed, it is exceedingly important that such persons should be carefully instructed as to personal cleanliness.

4—The isolation of chronic bacilli carriers in institutions such as insane asylums.

5—Operation in the nature of a cholecystotomy and drainage of the gall bladder or complete removal of that organ has resulted, in a number of instances, in removing the source of typhoid bacilli. Such an operation may very properly be performed on patients such as the insane, where because of careless habits, they may transmit the disease to others. It may also be very properly performed on individuals who have symptoms pointing to gall bladder disease. The fact however that the gall bladder is not the only source of the typhoid bacilli of carriers and that there have been instances in which operation failed to remove the carrier condition together with the severity of the operation makes it impracticable to recommend it as a routine procedure.

6—The administration of typhoid vaccines has in several in-

stances been successful in freeing carriers from typhoid bacilli; in others, however, it appears to have had no effect.

Summary and Conclusions.

1—Chronic typhoid bacilli carriers must be regarded as a menace to the public health, it having been shown that probably:

a—Five per cent. of all cases of typhoid fever becomes chronic typhoid bacilli carriers.

b—Three per cent. of all cases of typhoid fever continue to excrete typhoid bacilli for more than one year after recovery.

c—Twenty-five per cent. of all chronic typhoid bacilli carriers have never had typhoid fever.

d—One in every 1,000 of the population is a typhoid bacilli carrier.

e—Ten per cent. of all cases of typhoid fever are traceable to carriers.

2—Whenever there are household epidemics or a series of outbreaks of the disease in a locality or an institution or among soldiers in the field we should consider that a bacilli carrier is the most probable source.

3—If an individual has an attack of cholecystitis or biliary colic soon after an attack of typhoid fever, we should suspect that such has been caused by typhoid bacilli and that such a person is a typhoid bacilli carrier.

4—Chronic typhoid bacilli carriers transmit the germs to others, practically, only by the handling of articles of food, consumed without being cooked or handled after being cooked.

5—Persons who have recovered from an attack of typhoid fever should preferably not engage in an occupation such as dairying, doing kitchen work, etc., for at least one year after the attack.

6—Persons who have ever had typhoid fever or within a year been exposed to infection with typhoid fever should thoroughly wash their hands with soap and water before handling any article of food which is to be consumed without being cooked or reheated to the boiling point.

7—That the spirit of the rule of the Iowa State Board of Health namely "That no person in the state of Iowa who is known to harbor typhoid bacilli in the body, or in other words, to be a typhoid carrier, shall be permitted to handle milk or other dairy products offered for sale," may very properly be applied to all in whom there is a strong probability that they may be a typhoid bacilli carrier.

8—The administration of hexamethylenamin and typhoid vaccines and occasionally the performance of a cholecystotomy may be advantageously employed to remove the carrier condition.

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- NOTE—For additional reference see text book by Chopin on the source and modes of infection, article by Thompson on The Enteric Fever Carrier, Prof. Roy. Soc. Med. Vol. IV, No. 1; and article by Simonds on Typhoid Bacilli Carriers and Their Relation to the Public Health, Amer. Jour. of Am. Sci., Vol. CXL, No. 2, page 247.

DISCUSSION.

W. L. Bierring, Des Moines: It seems to me that we should be impressed by this interesting paper in several ways. First, in the citation of the different cases of definite carriers, with the peculiar longevity of the typhoid bacilli in the human body, some of these living for years; and one wonders in just what way they keep up this vitality—whether they really undergo growth or multiplication, or whether they are naturally subject to this long period of life in the human body. That the gall bladder seems to be an especially good habit for the growth of life of typhoid bacilli is a part of all these observations. On the other hand, one wonders to what extent convalescents from typhoid really become dangerous as carriers. If we recall the many cases that pass out from under our hands, and in which we are not able to keep up the urotropin or other modes of disinfection, and still we have very few instances of subsequent infection occurring in the neighborhood or environment of these patients. Evidently anti-bodies are formed in the body which gradually reduce the virulence and vitality of the typhoid bacilli while retained in the system, and when discharged with the excreta, there are influences existing outside of the body which in a sense are protectors. As cited in the paper of the chairman of the section, undoubtedly a great many of the pathogenic organisms, as soon as they get outside the body, lose much of their vitality. The solution of this problem presents many difficulties, and undoubtedly it will be one of the problems for sanitarians to solve for a long time to come. Yet, we all endorse, as representing the spirit of the State Board of Health, the rule, that all typhoid fever patients who are convalescent should be kept under observation for a certain time, should be given the benefit of urotropin and such other methods as seem to disinfect the tracts or channels where these germs are harbored, and especially by coming in contact with those persons who are known to be carriers of typhoid.

D. N. Loose, Maquoketa: The importance of this paper certainly cannot be over-estimated. In regard to my own experience to which Dr.

Albert referred, I of course was surprised to find that I had seven typhoid carriers in a family of ten.

T. F. Duhigg, Des Moines: I don't like to discuss such an important matter on such short notice. I want to compliment the essayist on his list. I see one important point in it: the reference to a dishwasher as the source of infection of forty other cases which occurred in the boarding-house within a few days. I don't know why the dishwasher should be convicted of infecting the other forty, because in the absence of proof to the contrary it is reasonable to suppose that the other forty got it from the same source that she did. My sympathies are with the dishwasher.

As the paper under discussion is on typhoid carriers, however, that leads us to the general proposition of preventive medicine. It is perfectly obvious, it seems to me, that typhoid bacilli under certain conditions do live for a considerable length of time outside the body. They have been recovered from ordinary earth, where it was dry enough to pulverize and by action of a gust of wind would form dust. From that cultures of typhoid bacilli have been recovered after a period of two weeks. Bacilli have existed in certain soil, being nurtured on pollution and in tests have stood up and answered roll call in over three hundred days after they were planted.

Now, it is a well-established fact that in years when the water level is extremely low we have the greatest number of typhoid fever cases. Last year the government report showed that the Mississippi river was lower than it had been for forty-five years, and the health reports from the Mississippi valley indicated excessive typhoid fever. Here very able men laid it to the water supply. I believe myself it was due to that, and I think it was so also in other cities; and it is unreasonable to trace every case of typhoid fever to a carrier, and it is unreasonable also to expect a bacillus to die promptly unless he is kind enough to lie in the sunlight and exhibit himself. Where there are a multitude of destroying organisms, obviously he will disappear very rapidly; but a low water level and a polluted soil will sustain typhoid bacilli for a considerable length of time.

Dr. Albert: (Closing), It is quite probable that with the large number of cases of typhoid fever, if they all become common carriers, either for a short time or a longer time, we should have many more cases of typhoid fever. It is known that as between the carrier and the patient who has typhoid fever, the patient is a much more dangerous source of infection—not because the typhoid fever patient excretes more bacilli, because it has been shown that often the number of bacilli excreted by the patient is far less than that excreted by the carrier, but it has been shown that with the prolonged residence of the bacillus in the body without actually producing disease it loses its virulence to a very large extent, and I have no doubt the fact that there are not a larger number of cases due to the carriers is because of this lessened virulence.

The question very naturally arises as to the value of examination of faeces and urine to determine the presence of bacilli and perhaps the advisability of quarantine. The Massachusetts State Board of Health has taken steps in regard to that, and has made a general ruling that an examination of faeces must be made and found negative before the patient can be released from quarantine. However, the results of bacteriological examinations of the faeces in many cases are negative, because the typhoid bacilli die very rapidly in the faeces, while in the urine they live a long time. It is quite different with the bacillus of diphtheria.

**PROPER REGISTRATION OF VITAL STATISTICS.
BIRTHS, STILLBIRTHS, DEATHS, MARRIAGES, DIVORCES,
SICKNESS.**

G. H. SUMNER, M. D., Des Moines, Iowa.

SECRETARY STATE BOARD OF HEALTH.

Every individual has a reasonable right to demand that his or her birth, death, marriage or divorce (should there be a marriage or divorce) shall be properly recorded somewhere besides in the Old Family Bible, for in many instances the absence of such record works a great hardship, besides inconvenience and hardship in many instances similar to the two cases which I shall relate and which are said to have actually occurred. A young man and wife came from Switzerland and settled in a nearby state. They were hardy, honest and industrious. They settled in the County of Switzerland, doubtless being attracted by the name of their homeland. In the course of time a baby girl came to brighten their home. The father being thrifty and intelligent, was soon made a foreman in a saw-mill. When his child was about two years old, the father was accidentally killed by a log rolling over him. Time had not been sufficient for him to accumulate property, hence the wife struggled with wash-tub and needle to earn a living for herself and child. One day the news came that a brother of the father, the child's uncle in Switzerland, had died leaving \$12,000 to the issue of his brother. Great was the rejoicing which, on account of the neglect of the physician to record the birth, was to become bitter sorrow. Before the Swiss Government would turn over the property, it must have proof that the little child was the issue of the dead man. Neighbors knew of the birth of the child but could not testify except as to their belief of the fatherhood. The testimony of the mother was not admissible in her own country for she could lead any child into court and declare any man to be the father. It was the physician's birth certificate, made at the time of the birth and presumably in the presence and by the authority of the father, that the law demanded. It could not be produced, and the helpless infant that the PHYSICIAN SHOULD HAVE BEEN EAGER TO PROTECT AND SERVE, lost its inheritance. What a cruel and unnecessary blow was this from the hand of a practitioner of the learned and benevolent science of medicine! Surely a physician's duty to the families he serves and to the helpless infants is not fully performed until he has made out a Certificate of Birth and taken reasonable care that it is made of due legal record. Another incident is related of a farmer who

*Read in Section on Preventive Medicine, 60th Session, Iowa State Medical Society, May, 1911.

left his valuable estate in trust of his unthrifty son, to go to his granddaughter on her twenty-first birthday. The girl had been told that the date of her birth was on a certain day of the month and year; and always celebrated the day as her birthday. The time came when she believed she was twenty-one, and therefore claimed her inheritance. Her father denied her age, saying she was only nineteen. The family bible was appealed to, but the leaf containing the family record was gone. No birth record had been rendered and the attending physician was dead. The Court was in a quandary. A Solomon was needed for judgment. At last a neighbor remembered that a valuable cow belonging to the grandfather had given birth to a calf on the day the girl was born, and he could swear to it. Perhaps the grandfather had recorded the date of the birth of the calf. His farm books showed this to be the case. The date of the birth of the human being was established.

What has been related regarding births is essentially true of the other Departments of Vital Statistics. It is as necessary that all stillbirths and deaths be reported in order that the proper tables of mortality may be made. These tables are essentially useful in studying all Public Health measures; and without them, we are like one traveling on a road with no guide-posts.

Marriages and divorces should also be properly recorded, for, in many instances a lack of proper records leads to serious complications as in cases of improper records of births.

Another important department of Vital Statistics is the proper recording of prevailing contagious and infectious diseases, for with such information at hand, Boards of Health are enabled to take active measures to prevent the spread of such diseases. It should be stated in this connection that the number of COMMUNICABLE DISEASES TO BE REPORTED TO THE STATE DEPARTMENT OF HEALTH should be amplified and made to include the following: Anterior Poliomyelitis, Anthrax, Bubonic Plague, Cancer, Cerebrospinal Meningitis, Chickenpox, Cholera, Diphtheria, Hydrophobia, Leprosy, Measles, Ophthalmia Neonatorum, Pellagra, Pneumonia, Scarlet Fever, Smallpox, Tetanus, Pulmonary or Laryngeal Tuberculosis, Typhoid Fever, Typhus Fever, Whooping Cough and Yellow Fever.

Referring again to births: If society is to continue, it must be recruited by births. While our population is increasing by immigration, if we are to have a healthy growth, the number of births must exceed that of deaths, hence the early notification of births is essential. The total number of births in a state or a city furnishes the basis of that important ration known as Infant Mortality. The full measure of protection to infant life can not be given unless all births are promptly reported.

If we are to obtain accurate statistics of births, it is necessary

that every birth should be properly reported for record. Upon a proper record of Vital Statistics therefore depends the prosperity and health of all States and Nations. It is the most important of all departments of Public Health Boards and should be the most liberally provided with funds for the carrying on of the work of proper registration and reports. Vital Statistics is the complete registration and tabulation of the population, marriages, births, disease, deaths and divorces, coupled with this, the full analyses of all the resulting illustrations with the purpose in view to examine thoroughly the path of Sanitary Progress.

It was that genuine philosopher and statesman, Benjamin Franklin, who said, "Public Health is Public Wealth." The truth of this statement cannot be disputed and it is to be hoped that our present statesmen will become enthused with these true economics to the extent that needed legislation will be enacted for improving the present Public Health measures.

Disraeli said, "The care of the Public Health is the first duty of statesman." Gladstone said, "In the health of the people lies the strength of the Nation," and only a short time since, the New York City Board of Trade passed unanimously, a resolution which reads as follows:

"Resolved, that the health and protection of life are more precious to the people and more necessary to their happiness than even the extension of our Commerce, the fostering of our Agricultural Interests, the solving of our Financial Problems, the cheapness or efficiency of our Postal Service, the importance of improving our rivers and harbors or the enlargement of our Navy."

The men who gave utterance to these statements were practical, successful business men who have accomplished much, and were not physicians or sanitarians. It must be acknowledged however, that the teachings of the Medical Profession have always been in accord with the resolutions now so universally adopted.

The conclusion is, therefore, that the importance of Vital Statistics to the family, the State and to medicine, can hardly be over-estimated. The physician is, except in instances, the only member of society who can supply information in regard to causes of death and the presence of Infectious Diseases; and a physician should remember when reporting Vital Statistics that he is giving obedience to the statutes of Iowa, on which he depends for protection; and that he is protecting the innocent and helpless, thus doing a general good and serving the profession to which he belongs and which he should delight to honor.

DISCUSSION

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of Health, but the Secretary is the head of it, and we only learn about it incidentally from what he tells us and what we observe.

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Keokuk County Medical Society met in Sigourney, July 27, at which time the following program was given:—

Cholera Infantum, W. W. Eastburn, Sigourney.

Acute Enteritis in children, Carl Tillmans, Sigourney.

Prostatitis and Treatment, Charles McKinnis, Ollie.

Hexamethylenamine, B. A. Filmer, Hedrick.

Poliomyelitis-Differential Diagnosis, Cora B. Negus, Keswick.

Post Partem Hemorrhage, with report of case, William Pfannebecker, Sigourney.

Ectopic Pregnancy, Chas. B. Taylor, What Cheer.

All papers were well discussed. The attendance of this society is always good and general interest marked.

The Wapello County Society has, thro Secretary Herrick, issued the program for 1911-1912. The society meets in the office of Dr. Williams at 8 p. m., the first and third Tuesdays of the month.

For seven years the Wapello County Society has issued a regular program and has conducted a course in post-graduate study. The members of the society are to be congratulated on the notice the work of the society has attracted. There are larger cities in the state but in none have the physicians been more faithful in their effort to keep up with the rapid advances in the science of medicine than has the members of the Wapello County Society. While this is true yet there are a few who are not taking advantage of the benefits to be derived from the preparation of papers and an active participation in the discussions and business of the society.

September 5, 1911.

Tuberculosis of Joints.....Dr. S. A. Spilman
Rheumatism Acute Articular.....Dr. E. T. Edgerly

September 19, 1911.

Tuberculosis of Hip Joint.....Dr. A. O. Williams
ErysipelasDr. F. W. Bowles
Physiology Report onDr. J. F. Herrick

October 3, 1911.

Tuberculosis of SpineDr. D. C. Brockman
Dysentery, BacillaryDr. J. W. Elerick

October 17, 1911.

Tuberculosis of BoneDr. W. B. LaForce
Acute TonsillitisDr. D. E. Graham

Societies elsewhere would do well to issue yearly programs and give timely notice of meetings.

The Scientific Spirit in the County Society.

E. B. BROWN, M. D., Beloit, Wis.

Time was when medicine was purely an art. It consisted in the art of healing without knowledge of the why, or regard for the wherefore. That time has passed. We are now in the age of Science, not Science alone but Science predominating over art in the study and practice of medicine.

Science is the lever that moves the world and in no line has it been more active than in the line of medicine and surgery. So general has been the spread of scientific knowledge even among the laity, that a man cannot safely practice medicine to-day without some regard for, and more or less devotion to Science. In the language of Malvolio, some men are born scientists, some eagerly acquire science, but alas a great share have science thrust upon them.

To have the scientific spirit does not mean that a man must be an adept with the microscope, the test tube and the incubator or that he must be able to determine the opsonic index or test for the Wasserman reaction. It does not even mean that he must be able to stain for T. B. or analyze a stomach contents or properly interpret an X-ray picture. But it does mean that he recognizes the value of these procedures and is in sympathy with all study and experimentation that tends to make diagnosis more exact and treatment more specific, and with all measures that tend to eliminate preventable diseases.

Now what should be the position of the County Society with regard to the scientific spirit? As the unit of the medical organization of the country, it should be a source and inspiration of scientific spirit for the profession of each county. If it fails in this, the failure must be due either to lack of attendance on the part of the members or failure to provide a timely and interesting program.

The first requisite of all is the getting of the men together. I do not believe that a group of medical men can spend even a half hour together in ordinary conversation without some inspiration to the scientific spirit. Listen to the conversations before the set program begins and you will find them talking about interesting cases. While riding on a car recently to one of our district meetings with a group of doctors, I was interested in noting the trend of the conversation. One gave the history, symptoms and signs of a case he had just operated upon for an unusual abdominal tumor and others attempted to make a diagnosis. Another told of the findings in a case of supposed cystic tumor in the inguinal region, which turned out to be a chronically dilated appendix forming a sac larger than one's fist, and so on. Now just the rubbing up against ones fellows and finding out what they are doing is one of the greatest inspirations to a man to keep abreast himself.

When I go around collecting dues, as I find it necessary to do I am sorry to say, I run across this and that member who says, "Well, I guess I'll drop out of the County Society. I don't see where I get any benefit from it." That man is invariably one who attends about once a year or perhaps not that often. He certainly gets no scientific inspiration and how could he expect to?

To have then, even a first chance to promote a scientific spirit, we must get the men out to the meetings. To do this, any procedure is justifiable even to a vaudeville entertainment if that will bring the result. No class of men are harder to get together than the doctors. The doctor always has at hand the excuse "too busy" or "a sudden call" if he is not anxious to attend. But the strange thing is that it is **not as a rule the least busy men who are the most loyal**, and too, we find that a man who one year excuses himself as too busy, another year, having been made an officer or appointed on a committee, becomes quite a regular attendant. A little personal responsibility often makes a regular attendant.

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Keokuk County Medical Society met in Sigourney, July 27, at which time the following program was given:—

Cholera Infantum, W. W. Eastburn, Sigourney.

Acute Enteritis in children, Carl Tillmans, Sigourney.

Prostatitis and Treatment, Charles McKinnis, Ollie.

Hexamethylenamine, B. A. Filmer, Hedrick.

Poliomyelitis-Differential Diagnosis, Cora B. Negus, Keswick.

Post Partem Hemorrhage, with report of case, William Pfannebecker, Sigourney.

Ectopic Pregnancy, Chas. B. Taylor, What Cheer.

All papers were well discussed. The attendance of this society is always good and general interest marked.

The Wapello County Society has, thro Secretary Herrick, issued the program for 1911-1912. The society meets in the office of Dr. Williams at 8 p. m., the first and third Tuesdays of the month.

For seven years the Wapello County Society has issued a regular program and has conducted a course in post-graduate study. The members of the society are to be congratulated on the notice the work of the society has attracted. There are larger cities in the state but in none have the physicians been more faithful in their effort to keep up with the rapid advances in the science of medicine than has the members of the Wapello County Society. While this is true yet there are a few who are not taking advantage of the benefits to be derived from the preparation of papers and an active participation in the discussions and business of the society.

September 5, 1911.

Tuberculosis of Joints.....Dr. S. A. Spilman

Rheumatism Acute Articular.....Dr. E. T. Edgerly

September 19, 1911.

Tuberculosis of Hip Joint.....Dr. A. O. Williams

ErysipelasDr. F. W. Bowles

Physiology Report onDr. J. F. Herrick

October 3, 1911.

Tuberculosis of SpineDr. D. C. Brockman

Dysentery, BacillaryDr. J. W. Elerick

October 17, 1911.

Tuberculosis of BoneDr. W. B. LaForce

Acute TonsillitisDr. D. E. Graham

Societies elsewhere would do well to issue yearly programs and give timely notice of meetings.

The Scientific Spirit in the County Society.

E. B. BROWN, M. D., Beloit, Wis.

Time was when medicine was purely an art. It consisted in the art of healing without knowledge of the why, or regard for the wherefore. That time has passed. We are now in the age of Science, not Science alone but Science predominating over art in the study and practice of medicine.

Science is the lever that moves the world and in no line has it been more active than in the line of medicine and surgery. So general has been the spread of scientific knowledge even among the laity, that a man cannot safely practice medicine to-day without some regard for, and more or less devotion to Science. In the language of Malvolio, some men are born scientists, some eagerly acquire science, but alas a great share have science thrust upon them.

To have the scientific spirit does not mean that a man must be an adept with the microscope, the test tube and the incubator or that he must be able to determine the opsonic index or test for the Wasserman reaction. It does not even mean that he must be able to stain for T. B. or analyze a stomach contents or properly interpret an X-ray picture. But it does mean that he recognizes the value of these procedures and is in sympathy with all study and experimentation that tends to make diagnosis more exact and treatment more specific, and with all measures that tend to eliminate preventable diseases.

Now what should be the position of the County Society with regard to the scientific spirit? As the unit of the medical organization of the country, it should be a source and inspiration of scientific spirit for the profession of each county. If it fails in this, the failure must be due either to lack of attendance on the part of the members or failure to provide a timely and interesting program.

The first requisite of all is the getting of the men together. I do not believe that a group of medical men can spend even a half hour together in ordinary conversation without some inspiration to the scientific spirit. Listen to the conversations before the set program begins and you will find them talking about interesting cases. While riding on a car recently to one of our district meetings with a group of doctors, I was interested in noting the trend of the conversation. One gave the history, symptoms and signs of a case he had just operated upon for an unusual abdominal tumor and others attempted to make a diagnosis. Another told of the findings in a case of supposed cystic tumor in the inguinal region, which turned out to be a chronically dilated appendix forming a sac larger than one's fist, and so on. Now just the rubbing up against ones fellows and finding out what they are doing is one of the greatest inspirations to a man to keep abreast himself.

When I go around collecting dues, as I find it necessary to do I am sorry to say, I run across this and that member who says, "Well, I guess I'll drop out of the County Society. I don't see where I get any benefit from it." That man is invariably one who attends about once a year or perhaps not that often. He certainly gets no scientific inspiration and how could he expect to?

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Dr. A. Reynolds, a graduate of the University of Vermont in 1846 came to Clinton in 1869, was engaged in a successful practice until 1873, when he was appointed Superintendent of the Independence Insane Hospital. He resigned in 1881 and resumed practice in Clinton where he enjoyed the leading practice until his death in 1899. Dr. Reynolds was once mayor of Clinton. Dr. Reynolds will be remembered as a gentleman of the old school type, courteous by instinct and inheritance, one of nature's noblemen.

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Among other early physicians of Clinton may be mentioned Dr. A. J. Hobart, a graduate of the University of Michigan 1859, Dr. C. W. Meyers, a graduate of Cleveland Medical College, 1870, and Dr. Hayard, a graduate of the Ohio Medical College, 1876.

Clinton County Medical Society was organized in 1859. In 1869, its constitution was revised and its membership restricted. It now numbers twenty-six members (1875) and holds quarterly meetings, Dr. C. B. Ireland, President, and Dr. H. S. Farnsworth, Secretary.

In the early history of Clinton county, malarial fevers prevailed somewhat extensively, but since that time, they have been only of occasional occurrence notably in 1872-73.

Diphtheria first made its appearance as an epidemic in 1860 but was not particularly fatal. It appeared in a malignant form in Clinton in September, 1875, from this date to Dec. 31st, there were 98 cases of which 48 were fatal.

The number of practicing physicians in Clinton county (1875) is 32. Of this number, 27 are Regulars, 2 Homepaths, 3 Eclectics. Of the 27 regular physicians, 21 are graduates and 6 non-graduates.

Dallas County.

Dallas County Medical Society was organized in Nov., 1868, Membership in 1875-25.

Biographical Notes of Pioneer Physicians.

Dr. M. B. Maulsby of Redfield was born 1817 in Wayne county, Indiana, where he received a common English education. Entered the Ohio Medical College at the age of 25 and after attending one course of lectures, returned to his native county where he engaged in the practice of his profession until 1854 when he removed to Dallas county, Iowa, where he has been engaged in a large and lucrative practice until the present time, (1875). Dr. Maulsby has been the President of the Dallas County Medical Society since its organization.

Dr. T. J. Caldwell of Adel was born in Vermeltown county, Indiana, in 1836. Educated at Newport University in 1851-52-53.

He removed to Dallas county in the fall of 1853. Began to study medicine in 1856, graduated from the Medical Department, of the State University, then located at Keokuk in 1861. After graduation, returned to Dallas county, and has been engaged in a large and profitable practice from that time until the present, (1875).

In 1862, Dr. Caldwell was appointed by the Governor examining surgeon of the militia of the county. In 1864, was appointed Assistant Surgeon of the 23rd Iowa Vol. Infantry, which position he held until the close of the rebellion. In 1872, was appointed examining surgeon for pensions which position he resigned in 1874.

Dr. E. Van Fossen, a graduate of Rush Medical College, Chicago, located in Adel in 1852, where he continued in the practice of medicine three or four years at the expiration of which time he was elected a member of the State Legislature. After serving one term, Dr. Van Fossen abandoned the practice of medicine and became a farmer.

An epidemic of diphtheria prevailed in Dallas county in 1861-62. It assumed a very malignant type complicated with erysipelas.

Interment and remittant fevers occurred in the low bottom lands along the streams and in the vicinity of low ground containing ponds of water, while typho-malarial fevers occurred in certain localities.

The influence of cultivation of the soil has been to very materially lessen the prevalence of endemic diseases, especially malarial fevers.

Dallas county is well supplied with chalybeate and sulphur springs affording a plentiful supply of the purest and best of water.

Local authorities have done nothing to supply the lack of state legislation regulating the practice of medicine.

The number of physicians in Dallas county is 27, of which 13 have diplomas and 14 have no diplomas. Of the non-graduates, 12 are regulars, one is an eclectic and one homeopath. Of the graduates, 13 are regulars.

Surgical Operations.

1867—Amputation of the left mammary gland. Cancer age 52, recovery. Died of other diseases 15 months later.

1868—Amputation of left arm at junction of middle with upper third, threshing machine accident, age 30, recovery.

1868—Amputation of thigh, lower third, age 65, necrosis of bone, recovery.

1869—Amputation of leg, lower third, age 60. Mowing machine accident, recovery.

1870—Amputation of thigh, lower third, age 48. Disease of bones of leg, died second day from hemorrhage.

1870—Amputation of forearm, lower third, age 16. Hand crushed in cane mill, recovery.

1872—Amputation of arm, lower third, age 22. Threshing machine accident, recovery.

1872—Amputation of leg, upper third, age 26. Necrosis of bone, recovery.

All the above operations were performed by Dr. T. J. Caldwell.

1872—Trephining, fracture of frontal bone, male, age 10, Drs. Dash and Kersey, recovery.

1875—Ovariectomy, tumor of left side operated in the usual manner. Pedicle secured by Spencer-Wells clamps. Drs. Dash and Kersey. Did well until the 5th day when she died from secondary hemorrhage from the wounded omentum.

1874—Trephining, fracture of the frontal bone, male, age 6 years, Dr. H. B. Criley, recovery.

The data for Dallas county was furnished by Drs. Maulsby, Caldwell and Criley.

INFECTIOUS ARTHRITIS WITH SPECIAL REFERENCE TO THE KNEE-JOINT.

WM. H. RENDLEMAN, M. D., Davenport, Iowa.

Within the last few years our ideas regarding the various joint diseases have undergone considerable change. We now look upon most of them as being of infectious origin, some with specific germs, others due to a variety of organisms. It is true that there are several bacteria which may produce identical joint lesions. The same germ on the other hand may produce lesions entirely distinct. The same organism that produces an acute synovitis with serous effusion may produce pus or there may be no fluid at all. Even in rheumatic fever it is possible that we are not dealing with a specific germ, for different bacteria have been found in the joint fluid which when injected into animals have produced identical joint symptoms. Among the joint affections which we now consider of an infectious nature are included rheumatic fever, the group covered by the term arthritis deformans, the arthritis accompanied by the acute infectious diseases, those due to the pus producing bacteria and a large group of chronic joint troubles not included in arthritis deformans, and yet evidently of an inflammatory nature.

In this paper chronic joint troubles and rheumatic fever will not be discussed.

Much remains to be learned of the bacteriology of septic arthritis. In the majority of cases the aspirated fluid shows no

*Read before the Des Moines Valley Medical Society, June 15, 1911.

germs. They are either too scarce to be frequently found or are buried in the synovial membrane. Then, too, toxins manufactured elsewhere and circulating in the blood may cause joint irritation.

Bacteria have been found sufficiently often, however, to prove that in joint complications of gonorrhea, pneumonia, typhoid and some others the same germ causing the disease may cause the joint trouble. The organisms which have commonly been found to cause arthritis are the following: gonococcus, streptococcus, staphylococcus, pneumococcus, colon and influenza bacillus. Infection may reach the joint through the blood, by extension from neighboring infection or directly from the outside through an open wound. An arthritis may complicate most of the acute infectious diseases, in which case a septicaemia exists and the infection is easily carried to the joints. The most common acute diseases with joint complications are gonorrhea, typhoid, scarlet fever, pneumonia, influenza, measles, meningitis and dysentery. Local pus infections elsewhere in the body are a frequent source of arthritis. Gonorrheal infection of the prostate and seminal vesicles, sinus trouble, tonsillitis, middle ear disease, pus tubes and many others may be the source of germs or toxins which are carried by the blood to the joint. The intestinal canal including the appendix, has lately been considered a cause for joint trouble. Cases of long standing arthritis have been cured by catharsis and colon lavage. The nature of this source is not understood. Whether some unknown germ is manufacturing toxins in the intestinal canal or whether there is an accumulation of normal digestive products we do not know. Direct extension from an osteomyelitis or phlegmon to the joint is frequent. Puncture and gunshot wounds and compound fractures give entrance to some of the most virulent of all joint infections. Sprains and other slight injuries to joints frequently precede arthritis. Particularly is this true of children in whom the ends of the bones are easily injured and susceptible to infection. Shortly after birth arthritis is naturally a result of navel infection, or of gonorrhea within a few months.

The pathological changes vary from a slight thickening of the synovial membrane to almost complete destruction of the joint. In the milder forms there may be only a synovitis with involvement of the endothelial layer of the synovial membrane. In more severe forms this is destroyed with perhaps also the cartilage and ends of the bones. The capsule is indurated and the periarticular tissues swollen and oedematous. The contents of the joint may be a serous, purulent or bloody fluid. In some it is hardly increased at all, while in others the joint is so distended with pus that rupture into surrounding tissues takes place. Atrophy of the muscles, relaxation of the ligaments and subluxations are complications. Besides the

joint there may be an adjoining osteomyelitis and extensive changes elsewhere in the body depending on the primary cause. Except where the sepsis is so great as to endanger life the resulting stiffness is what concerns us most. Ankylosis is to be expected in most suppurative conditions and in many where there is even no effusion. This may be articular or periarticular. If articular the ankylosis may be fibrous from union of the opposite surfaces of the synovial membrane or osseous when bony union follows destruction of the cartilage. Periarticular ankylosis may be caused by thickening and shrinkage of the capsule or from adhesions and shortening of the muscles and tendons. The form of infection does not necessarily determine the pathology as any of the above bacteria may produce any degree of change in the joint.

The onset of septic arthritis is usually abrupt but this may be masked by, and for awhile overlooked on account of, the presence of some general infection. The constitutional symptoms of sepsis: fever, chills, sweats and weakness are present in variable degrees. Some severe cases run their course without much general disturbance. Considering all forms of septic arthritis there is a tendency for it to be monoarticular. When polyarticular all joints that will become involved are usually so from the beginning. There are a few cardinal symptoms referable to the joint in all forms of acute arthritis. Pain and tenderness over the joint, muscular spasm with flexion, heat, redness, signs of fluid and loss of function are commonly present. The muscular spasm and flexion are produced by stimulation of the nerves supplying the muscles moving the joint. A common law in anatomy is that the nerves supplying the joint also supply the muscles moving it. The flexors being stronger than the extensors cause flexion. This position lessens tension and relaxes the ligaments causing rest and comfort. In acute serous synovitis there may be little evidence of any trouble except for the effusion which will usually disappear in three or four weeks. In the suppurative form the course is usually months. When of gonorrheal origin arthritis may be divided pathologically into about four varieties.

1. The dry form with, indefinite joint pains, which lasts a short time and disappears or occasionally becomes chronic.

2. The serous effusion lasting a few weeks and subsiding with moderate fibrous adhesions.

3. The plastic form with no effusion and resulting in ankylosis.

4. The suppurative due either to the gonococcus or to a mixed infection and resulting in strong fibrous or bony ankylosis. Gonorrheal arthritis often begins in several joints simultaneously soon subsiding in all except one joint where it is very persistent. It

occurs in from 3 to 10 per cent. of all gonorrheal infections and may come on as late as one or two years after all local discharge has ceased. It is not uncommon in children and may come from a genital infection or from a conjunctivitis. Pneumococcal arthritis is present about once in 800 cases of pneumonia and is usually suppurative. It seldom develops primarily in a joint. In typhoid arthritis the hip is the usual location in which dislocation occurs in about 50 per cent. Suppuration in the joint may be difficult to tell if the symptoms are masked by a general infection. In any doubtful case aspiration should be performed without delay.

These acute joint infections must be differentiated first and most important of all from rheumatic fever. This is usually easy if a careful history of the onset is obtained and a thorough examination for a focus of infection elsewhere in the body as prostatitis, urethritis, tonsillitis or abscess is made. Rheumatism has a greater tendency to jump from one joint to another and responds to the salicylates. It is also important to know if there is primary osteomyelitis indicated by extreme tenderness on deep pressure over the bone. Early evacuation of pus here may save the joint. When rheumatism is suspected in children this should be looked for and it should be remembered that rheumatism under two years is rare.

In the treatment of all acute joint disease immobilization and rest are required. When too long continued, however, the procedure may render what otherwise would have been a useful joint, one in which there is ankylosis, and perhaps too in a useless position. Next to saving life and limb the future usefulness of the joint is the most important. Much depends on good judgement as to just how long a joint should be immobilized and how soon movements should begin. Besides ankylosis and contraction other bad results to be avoided are atrophy of the muscles, foot drop, wrist drop, scoliosis and lateral motion especially in the knee.

In the beginning a joint may be fixed by a splint and heat applied. Weight extension when applicable should be used. A Buck's extension is very useful for a knee joint using from 10 to 25 pounds depending on the size of the patient. This method relieves tension in the joint, stops the pain, prevents the joint surfaces from coming in contact and is the best guarantee against ankylosis. Credit should be given Murphy for the importance he has put on this method of treatment. In serous synovitis of the knee a Buck's extension is usually all that is necessary. In other joints splinting in a comfortable and useful position is sufficient. If the effusion is large aspirate. As soon as the acute symptoms of pain, tenderness and heat have subsided the splint should be removed daily and careful massage of the muscles and passive motion instituted. Soon active motion is tried for this develops the muscles as well as mobilizes the joint. If pus is present or a suspicion of it aspirate.

preferably with a trocar for confirmation. If the constitutional symptoms are not threatening a small incision on each side of the patella (if dealing with knee), left open without drainage and followed by a Buck's extension will suffice. In the very septic types it may occasionally be necessary to make large incisions and leave tube drainage. I believe that drainage of any kind should rarely be used because the exposure of a serous surface to the air insures its destruction and consequent ankylosis. Murphy's plan in empyaema of the joint is to aspirate and inject 2 per cent. formalin in glycerine prepared 24 hours previous to the amount of about 15 cc. for the knee. If the joint is distended the next day the aspiration alone is repeated. The third day reaspirate and reinject. This process may be repeated 4 to 5 times. Then if pus continues to form 15 drops of Old Venice Turpentine are injected which causes severe reaction with the formation of a thick sterile pus which is evacuated through a small opening. The joint is meanwhile at rest with extension.

Special forms of arthritis require treatment peculiar to the infecting cause. It is obvious that the cause if found should be treated. Urethritis, prostatitis, tonsillitis and intestinal stagnation should have all their appropriate treatment. In gonorrheal arthritis the vaccine treatment is a valuable aid. A beginning dose of 10 to 25,000,000 dead gonococci should be injected gradually increasing the dose and repeating every three to five days. In chronic types give larger doses and less often. Opinions differ considerably as to the value of Bier's hyperaemia.

The after treatment consists principally of removing stiffness. Consideration of the muscles moving the joint and their nerve supply is also important. Deformity due to contraction of the muscles and tendons of the joint is overcome by gradual extension with weight and pulley assisted by massage. Tendoplasty by actual lengthening of the tendons may be necessary and is preferable to forcible stretching. When there is fibrous union of the joint surfaces repeated manipulation with infinite patience on the part of the patient may bring about good function. I would strongly advise that this work be done by a professional. Breaking up adhesions under anesthesia is advisable in connection with the manipulations. In those cases where firm union has taken place, either bony or fibrous, forcible correction does more harm than good for firmer union than ever results from the additional injury. Much work has been done of late in the field of arthroplasty and the work of Murphy and others is very encouraging. A pad of fascia with considerable fat is inserted between the joint surfaces. The fat liquefies forming a hygroma or bursa on which the joint surfaces glide. This is applicable in the hip, shoulder, elbow, knee and maxil-

lary joints. A serious drawback especially in the knee is the inevitable weakness which follows excision of the capsule and lateral ligaments necessary to get the joint mobilized. Momberg has described an ingenious method of limbering the joints by daily applications of rubber bandage so as to exert continuous elastic pressure. This tires out the muscles, stretches adhesions and causes very little pain.

What Is the Remedy?

Has each member paid his annual dues to the county medical society for 1911? If not, why not? Is the local secretary or the individual to blame, or is it a case of divided responsibility? Or is the medical organization at fault? The practice of medicine is a profession and not a trade, but proper business methods interfere in no way with the humanity, the dignity or the success of the conscientious physician. The physician should promptly collect his accounts and as promptly pay his own debts. Dues can be paid in December or in January just as well as in the middle of the year, and one of the first bills to be paid in January should be the annual dues to the county medical society. The county society that allows members more than six months in which to pay their dues is guilty of encouraging the slack business methods with which physicians as a class have been charged. The Committee on Uniform Regulation of Membership of the American Medical Association recommended last year that "suspensions" be abolished and that the roll of members of county and state societies be made up anew each year of those who pay their dues in January in advance, only three months being allowed for the completion of the list of members.

The directory of sixty of the county societies was published in the July Journal, page 52. We want them all. If your society was not listed, send in the correct data.

John B. Murphy, M. D.—Now I have an unpleasant and most painful duty to perform, and that is to call this body's attention to the shortcomings of the medical profession—to the irregularities, immoralities and crimes that have crept into its practice. These have come to be recognized as public scandals. When public speakers attack us; when pamphlets derogatory to us receive general circulation; when newspapers repeatedly print exposes, there are too many in the secret for us to avoid open condemnation. For years within the confines of our organization, we have endeavored to suppress irregular advertising and exploitation. We have succeeded in producing penal enactments against abortion and infanticide, and have fairly well suppressed the practice. We have in many states abolished the quack advertiser and convicted a number of violators of these laws. If the exposure of the guilty physician had no other effect than to destroy the public confidence in that individual it would matter little to the profession in general, but it has a much deeper significance, it lessens confidence in all medical men and in all medical measures.

D. S. FAIRCHILD, M. D......Clinton
 EDITOR
C. A. BOICE, M. D......Washington
 ASSOCIATE EDITOR

No. 4

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ously. These tracings, when considered in the light of newer facts as to the physiology of the heart, with the emphasis laid on the muscle as compared to the nerve, with studies as to the origin of the heart beat near the venous sinus, its transmission through the auricle and the bundle of His to the ventricle. With the blending of the fibers of the His bundle, with the Purkinje's fibers anatomic studies showing the nodes in the auricle and the gross and microscopic lesions found in some cases of disease in which tracings have been made—all this has thrown much light on the cardiac movements, many of the irregularities of the heart, the Stokes-Adams syndrome, tachycardia, etc. New terms have come into cardiac terminology, as extra systole, Tawara's node, etc. Much semblance of order has come out of the chaos of the group of cardiac irregularities, and more will surely come. Some practical results have been derived, such as the occasional accurate separation of a nervous irregularity from an organic myocardial one. But, in general, it may be said that the polygraph and other similar instruments will be reserved for the hospital research worker or the specialist. The time required for their use, the special training necessary for the proper registering and the not easy interpreting of the tracing and the comparatively slight value from the standpoint of practical diagnosis and treatment will make the general practitioner rely, for the present at least, on the old fashioned methods of diagnosis, the history and the use of the trained eye, ear and finger.

Electrocardiography.

A still more remarkable means of studying the heart is by the aid of Einthoven's electrocardiography. Minute electric currents, generated by the action of the heart, are communicated to a microscopic thread suspended in a strong magnetic field. The movements of this thread, the string galvanometer, when magnified and photographed, constitute the graph known as the electrocardiogram. By the study of these curves much has been learned as to the heart's movements in health and disease. Kraus and Nicolai have just published a volume on this subject, full of scientific data, and the result of long and careful study. Many others have written on the same topic, and there is promise that much practical good may result. It is wonderful; such work will surely be continued. One can hardly believe it, yet electrocardiograms of the normal and abnormal heart sounds are now traced—phonocardiograms.

The Einthoven apparatus is not, however, adapted to the needs of the general practitioner. In the first place it is expensive. A complete outfit, installed, costs \$1500 to \$2000. Then it is a complicated piece of apparatus and, to be kept in order, requires the services—as one of my friends in the East told me of his own apparatus—not alone of a mechanic, but of a physicist as well.

And the practical results are as yet rather meagre. But for research workers, and especially in hospitals and physiologic laboratories, the use of the string galvanometer, as of the polygraph, is highly desirable, as from a study of the heart by such means there will result a more accurate knowledge of the physiology and pathology of the organ, and a more rational therapy.

The Roentgen Ray.

Had time and opportunity been favorable for the preparation of a sufficient number of suitable lantern slides, I should have taken as the subject of this address the value of the X-ray in the diagnosis of disease of the heart. For there can be no doubt that the Roentgen ray is of great help to us in this respect. The size of the heart is clearly shown and its shape as well. Careful studies show fairly distinct differences in form between the hearts of the various lesions; the enlarged heart of aortic regurgitation and mitral stenosis; or the bovine heart of chronic interstitial nephritis and mitral stenosis, the senile heart, the "drop heart," the heart surrounded by pericardial fluid. Otherwise undetected aneurysms or mediastinal tumors, pleuro-pericardial thickenings, calcified glands, pulmonary infiltrations may be discovered. Good work of this kind is not necessarily limited to the specialist or to the large hospital. Most excellent skiagraphs are taken in small towns by general practitioners, and with comparatively simple and inexpensive apparatus. I am inclined to think we shall learn to rely more than we do upon the actual inspection of the shadow of the heart as it is working, i. e.—upon the use of the fluoroscopic screen. This implies not only a very dark operating room, to the darkness of which the eyes of the operator are to become accustomed by waiting several minutes, but it implies as well a quiet patient, a good machine and a first-class fluoroscopic screen. By suitably arranging light and screen the heart can be studied at one sitting from various angles and at various levels, and its pulsations, as well as those of the larger vessels, are plainly to be made out together with the working of the diaphragm. The pulsation of the shadow, is at times of great help in the diagnosis between tumor and aneurysm. With suitable apparatus, the result obtained will be as accurate and convincing as from the use of the orthodiagraph, though this latter method of X-ray inspection with registering of the findings is not difficult of application and gives splendid results. I have mentioned a study of the heart from various angles as possible by the use of the fluoroscope. Whether one studies the heart by aid of the screen or by means of the ordinary skiagraph, it is well to remember that in many cases it is desirable to get a lateral or an oblique view of the chest, so that we may have some conception of how far backwards the heart and aorta project, and of their relations to the

posterior mediastinal space. Such a view, for instance, as is obtained in what Holzkmnecht calls the first oblique position, where the observer or the plate is at the right anterior side of the chest, and the light at the left should give great help. The work of Holzkmnecht, Brugsch and Schittenhelm, or of Groedel, among others, may well be consulted for help in understanding the technique and findings of the transverse and oblique illuminations.

In brief, I would say that the X-ray is of very great value in the study of disease of the heart and aorta; in some instances it supplies the crucial convincing proof without which the diagnosis would be conjectural only. A possible danger lies in two directions. We may easily fall into the habit of relying too much upon the X-ray and of failing to use the ordinary means of physical diagnosis, auscultation, percussion, etc., and again we may misinterpret the findings. At first blush it would seem to be an easy thing to tell what is seen in the negative, or to interpret a fluoroscopic shadow. But all who have tried it know that at times it is not easy to be certain as to the correct interpretation and that experience and a logically working mind are essential here as in telling the meaning of dullness on percussion or bronchial breathing. So, after all, the Roentgen ray must be classed as a confirmatory aid. And probably most of us would prefer to rely for our plates on an X-ray specialist, whose work will, on the average, be much superior to our amateur efforts.

Test of the Heart's Functional Power.

The important question that confronts the physician who is studying a diseased heart is not so much what valve is affected, nor how large is the heart, nor how rapid its beat, as what is the ability of the heart to do its work under stress or even under the ordinary demands made upon it by the patient's daily occupation; what is the reserve power of the heart? To determine this point has been the aim of several tests, so-called functional tests of the heart's efficiency. The aim has been to express comparatively, or even numerically, the ability of the heart to meet the demands that may be thrown upon it. The ordinary way of measuring the heart's power is familiar to every physician. Is the patient cyanotic? Does he suffer from dyspnea on slight exertion, or on walking up stairs? Is there edema of the ankles, engorgement of the liver, a trace of albumin in the scanty urine (congested kidney), a cough with rales (congested pulmonary circulation)? If so, the evidence points toward myocardial weakness.

The supposedly more accurate tests have depended in general upon an observation of the pulse rate and the blood pressure under certain test conditions, and finding that with a weak myocardium there is a reversal or an absence of the ordinary results. To

illustrate: Herz finds that a sitting patient who flexes and extends his right forearm, making the movement slowly, without forced muscular contraction, antagonizing the flexion by the extensors, the while holding his attention fixedly upon this act, will, if his heart be weak, have the pulse slowed even by twenty beats per minute, though in health no such change should occur.

On changing from the standing to the recumbent posture, the pulse naturally slows down, say ten beats per minute. A failure of the pulse to beat more slowly has been thought to indicate muscular weakness. (Shapiro and others.)

Increasing peripheral resistance, by pressure upon large peripheral arteries, as both brachials or both femorals, or the abdominal aorta, raises blood pressure. Katzenstein observed that with greatly weakened heart the systolic blood pressure does not rise under these circumstances but often falls.

After brief exercise, as walking up stairs, the heart beats more rapidly and blood pressure rises. The blood pressure continues to rise, however, after the pulse has returned to its old rate, and the pressure is much slower, by several minutes, in returning to normal than is the pulse. With weakened heart muscle the rise of systolic blood pressure may be slight and delayed or there may be no rise whatever, even a fall, though the pulse may be rapid. This is Graupner's test.

All of these tests have a certain value. But there are so many exceptions to the rules, so many disquieting circumstances, such, for example, as nervousness, that from the practical point of view they can not be very enthusiastically endorsed. The older, perhaps cruder, test of noting the degree of cyanosis, the rales in the chest, the trace of albumin, the dyspnea, the strength, rate and quality of the pulse, is still the one most to be relied upon. So much by way of irrelevant introduction.

Pain.

Pain is infrequent in most cases of heart disease, and the conspicuously painful diseases, such as angina and pericarditis, are relatively rare. It is natural, therefore, for one too readily to assume in the absence of pericarditis or evident angina that the precordial pain is not associated with the heart. It is the object of this paper to call attention not alone to certain confusing facts concerning pain in pericarditis and angina but to the occurrence of pain in connection with the disease of the heart.

Pericarditis.

Frank, outspoken pericarditis causes pain of such severity and such definite localization, and is attended by such changes of posture, character of respiration, pulse rate, and by such typical physical signs that little difficulty is encountered in recognizing the

condition. But in some instances the pain is referred not to the precordia, but to the back of the shoulder, or even, as in angina, to the neck and arm. More confusing still is the abdominal, particularly the epigastric, reference of pain. When this comes on suddenly, with rise of temperature and vomiting, and when pressure in the epigastrium causes pain, as it may, from the pressure upward upon the diaphragm, and in this way upon the inflamed pericardium, the resemblance to abdominal disease, such as perforated gastric ulcer, pancreatitis, cholecystitis, or local peritonitis from any cause, may be striking. And even with detection of a pericardial friction the history of the case and a most critical examination of the physical condition may be necessary before one decides that the abdominal symptoms are entirely secondary and rules out a primary sub-diaphragmatic inflammation with a secondary process in the pericardium.

More surprising than these cases of pericarditis with atypical reference of the pain are the cases in which there is no pain. Pain may be masked by that of an accompanying pleurisy, or may be ignored by the patient because of the apathy of toxemia. Pericarditis is easily overlooked for these reasons in acute pneumonia, as well as for the reason that the friction sound may be inaudible because of the soft nature of the exudate, or because the sound is drowned by the attendant bronchial, pulmonary and pleural noises. But in other conditions, as in nephritis, rheumatism or chorea in children, in tuberculosis of the pericardium, well-marked friction sounds may be present as the only sign of pericarditis, pain being absent.

Acute Myocarditis.

Acute myocarditis may be painless, even the so-called septic form with multiple disseminated abscesses as in pyemic conditions. In acute interstitial myocarditis, however, as is met with after diphtheria, pain is some times quite severe. This fact is worth emphasizing, for it may be the first hint of the existence of this serious cardiac condition. Formerly, the sudden deaths from a failure of the heart during convalescence from diphtheria, or more rarely during the course of the illness, were attributed to an involvement of the vagus nerve. Later studies, and particularly the researches of Romberg and Passler, have shown a more frequent cause to be a diffuse myocarditis, with numerous areas of small-celled infiltration and with inflammatory and degenerative changes in the muscles themselves. Pallor of the face, weaker, more irritable or irregular pulse, perhaps nausea and vomiting, may be present. But often it is a constricting substernal pain, at times with some radiation to the arms and neck, that gives warning. Epigastric pain is also met with. This pain may be seriously aggravated by movement.

I have seen a girl of eighteen suffer almost as in angina from walking merely the length of the ward, and the serious strain on her heart made evident also by her ashy color, the dyspnea and the small and rapid pulse. While antitoxin has lessened the number of cases of this sort, they are still occasionally seen, and the importance of their recognition so that appropriate rest may be enjoined is self-evident. Pain may be the signal that warns us.

Romberg calls attention to a group of post-diphtheric cases in which even many days after the throat has cleared and when the patient seems well on the road to recovery from the early alarming myocardial lesion there are paroxysmal angina-like precordial pains, with vomiting and even collapse. In a nervous woman, whose condition between these attacks is one of seeming health, the mistake may easily be made of regarding the whole affair as a functional one, a "nervous spell." "The cardiopath is often a neuropath" is easily said, but we forget it too readily.

While diphtheria affords the best example of this complication, other diseases, such as typhoid fever, scarlatina, rheumatism, may cause a similar myocarditis, and in these diseases cardiac symptoms among which pain may be mentioned, should receive attention, even though no valvular or pericardial involvement is to be made out.

Valvular Disease.

through no valvular or pericardial involvement is to be made out. to pleurisy, muscular rheumatism, neuralgia, or as a manifestation of neurasthenia. Nor should the polygraph, sphygmomanometer, string galvanometer stethoscope, functional tests and physical signs important as all these aids are, be permitted so to obtrude themselves into the view as to shut out certain subjective symptoms such as pain. Pain may mean heart disease, and that heart disease may be valvular. Anyone who will look over his records of valvular disease will find, perhaps to his surprise, numerous histories of complaint of pain. By this is not meant the sense of oppression or suffocation that goes with muscularly incompetent heart, but a real pain, something that hurts. And frank angina pectoris is not meant.

That lesions of the aortic valve, particularly sclerotic lesions, resulting in aortic regurgitation, are often accompanied by pain is well-known. This pain may be clearly of the type of angina pectoris. The explanation for this frequent association is the coincident sclerosis in the coronary arteries or in the root of the arch of the aorta, i. e.—the conditions that make for true angina are present and the pain may be regarded as genuinely anginal.

But with mitral disease also, there may be pain. This is not at all infrequent in mitral stenosis. Short, sharp, painful catches or sticking pains in the region of the heart, sometimes on exertion, sometimes under excitement, yet often when the patient is quiet,

are common. The pain may be fairly severe. It is usually localized, rarely radiating as in the typical angina. Now, when this precordial pain is associated with complaint of palpitation and of nervousness, and when the woman—and this lesion is unusually common in women—is clearly neurotic and inclined to exaggerate, it is easy to conclude that the pain is purely functional. And the error may be more readily made because this pain in mitral stenosis may precede any marked signs of cardiac muscular insufficiency. And so with the regular, fairly full pulse, with no dyspnea, cough or edema, the attention is attracted away from the heart and to the nervous system, and the significant localized though faint presystolic murmur and other signs at times are overlooked in the hasty examination. I have learned to examine with especial care for mitral stenosis in patients who complain of palpitation, nervousness and even slight dyspnea, and who describe at the same time sharp or stabbing pain in the heart region. One should not decide too soon that one is dealing with neurasthenia or masked Basedow's disease. Eichhorst's statistics of twenty years ago, showing that aortic disease is oftenest of all valvular lesions accompanied by pain, would probably be borne out by the experience of others. But his percentage for cases of mitral stenosis is (4 per cent), I believe, much too small. My own experience, at least, is different.

The pain here referred to is not the epigastric pain, fullness and tenderness due to a passively congested liver. Nor do I mean the possible intercostal neuralgia associated with disorders of digestion that are due to a muscularly insufficient heart of the later stages of mitral disease, either regurgitation or stenosis. This pain, to which reference is made is distinctly not of this source. It is seemingly, as the patient themselves often think, cardiac in location and origin. And the fact that a neurotic, introspective individual believes her precordial pain is due to some heart disease ought not too easily to prejudice us against the correctness of this view. Even the hysterical woman may have organic disease, and the mitral disease, with its real pain, may be the lesion that induces a train of nervous symptoms, on the order of a traumatic neurosis.

Reference to the epigastric discomfort, at times amounting to real pain, due to a passively congested liver, might lead one to discuss the importance of the recognition of this condition. For the local pain and tenderness are at times misinterpreted as due to some serious disease of the stomach, such as carcinoma, or to cirrhosis or other grave disease of the liver. The detection of the enlarged tender, smooth liver, perhaps a little icterus, and the plain evidence of an incompetent heart makes the origin of the condition and its essential nature clear.

Angina Pectoris.

A paper on pain in disease of the heart must naturally contain

some reference to angina pectoris. It is not my intention, however, to discuss this topic in any detail. Its essential clinical features are too well known to warrant repetition. And the explanations as to the origin of these paroxysmal pains in the precordia are so numerous and so largely speculative that it hardly seems appropriate on this occasion to discuss them. Osler's recent review of this whole subject and Allbut's brilliant remarks are interesting and illuminating. It has been my fortune to see a considerable number of cases of this dread malady, and I have encountered among physicians a rather wide diversity of opinion as to what could or should be called angina pectoris. And of necessity there must remain much of confusion in the interpretation of a clinical entity—a complexus of symptoms or a syndrome, some call it—concerning whose underlying pathologic etiology there is still so little unifying knowledge. Most of these mistaken notions have arisen, it seems to me, from a too strict adherence to the picture presented by the typical case in which the excruciating precordial pain radiating to the neck and arm brings the patient to a sudden standstill, in an agony of physical and mental suffering, as he feels himself face to face with death.

But we are no more justified in drawing the outline of angina and arbitrarily saying that any alteration of this picture by the addition or omission of any line is not allowed than we are in dogmatically stating that lightning pains, Argyll-Robertson pupil, with loss of knee jerk, alone make the picture of tabes, or that the grouping of symptoms in Basedow's disease is unalterably fixed. In other words, variations of this type are encountered and attention is briefly called to a few of the atypical features that experience has proven to be confusing. These points are more fully brought out in a paper that I read at the meeting of the American Medical Association last year.

Anginal attacks even fatal attacks, may take place in one whose blood pressure is not high, whose peripheral arteries give no evidence of sclerosis, and whose heart is not demonstrably enlarged. Isolated coronary sclerosis or an aortitis, particularly a syphilitic process at the very beginning of the aorta, may be the underlying cause of the angina, and the general arteriosclerosis so commonly—and correctly—associated in the physician's mind with this disease may be lacking.

Another not uncommon mistaken notion concerns the number, duration and severity of the attacks. So frequently the attacks are single or very few, of extreme severity and last but a few seconds, that this conception of the disease is indelibly fixed in the mind of the practitioner, and shuts out for him the conception of any possible marked variation from this type as consistent with true angina. As a matter of fact, the attack may be solitary, the one being fatal; or the attacks may be several, at long intervals, or they may be

frequent, many in a day. I have seen as many as six and eight paroxysms in a day. Neusser mentions a woman with twenty a day. They may vary in degree from those almost unbearable to mild, almost negligible, pain. And angina sine dolore is undoubtedly a reality. Some of the attacks may last much longer than a few seconds or a few minutes, and there is apt to be left a soreness or ache in the shoulder, elbow or inner side of the left arm, perhaps an ache or numbness extending down to the fingers. This residual pain may carelessly be regarded as rheumatic or neuritic. The tenderness of the skin over the left chest, as described by Head, may be present. This point of the duration of the attack is one I wish to touch upon again a moment later.

It is not to be forgotten that the usual exciting causes, over-exertion, brisk walking, over-distended stomach, fit of anger, etc., may be lacking. And the cause, e. g.—a rapid walk, that brings on an attack to-day may to-morrow fail to do so. Charles Sumner at times had an attack from some slight movement, such as turning in his revolving library chair, while he might be free when engaged in earnest debate, though making various gestures. And, again, one must be prepared for true angina in women; probably three to ten per cent. of cases. This fact should be kept in mind even though there is plainly to be made out a strong neurotic taint, for the clearly functional, even hysterical, manifestations may easily mask the more serious organic condition that underlies.

Rarely unconsciousness occurs. Nearly always the patient stands or sits still, immobility and the unwillingness to lie down being quite characteristic. Yet some patients, as Charles Sumner, are active during the seizures and walk about while suffering excruciating pain. And in one instance I have known the patient, an old colored man, to lie flat on the floor, the sidewalk or the porch, wherever the pain caught him, and to insist that only in this position was the pain endurable.

I might add a word as to prognosis of angina, and I am referring to what is usually called—though with protests from many—true angina in contradistinction to so-called false angina. If we exclude these pseudo-anginas and also the clearly toxic anginas, such as that due to tobacco, the prognosis is unquestionably grave. But it is not necessarily fatal, and surely does not imply death in the immediate future. John Hunter's coronaries were proven to be sclerotic, yet he had attacks for twenty years. With care as to diet, the removal of physical and nervous strain, with the institution of a hygienic and temperate mode of life instead of an over-strenuous one, and with the judicious use of drugs, among which the most useful are the nitrites, the iodides and digitalis, life in not a few cases may be prolonged for many years, and the patients may enjoy a fair degree of comfort.

Coronary Obstruction.

There is a form of angina due to embolic or thrombotic closure of a coronary artery to which I wish to call particular attention. For it has certain features that enable one to suspect its occurrence or to diagnose it with a fair degree of certainty, and the importance of such recognition will be seen when one realizes how the symptoms may resemble those of other conditions, even surgical ones, and also how such recognition enables one to exercise unusual precautions in the way of treatment and to be prepared with a grave prognosis. A rapidly developing obstruction of a coronary artery may cause sudden death. In fact, the descending branch of the left coronary has been called the artery of sudden death. But such obstruction, if slowly developing, or even if extensive and developing, quite rapidly may not prove immediately fatal. The left coronary, for example, may be completely plugged close to its origin and yet the patient may live for many hours or for several days. The area of the myocardium supplied by such obstructed artery naturally becomes anemic, ultimately necrotic and, to a large extent certainly, functionless. But just as an arm or leg may move, though in an imperfect manner, even though several of its muscles are paralyzed, so in an imperfect and halting way the damaged heart muscle may for a time perform its function.

Aid is furnished the anemic area to some extent from anastomosing vessels, for some anastomoses do occur, though they are not of much nutritional importance, and help comes also from the vessels of Thebesius opening directly from the heart chambers. It is in such anemic areas—the myomalacia cordis of Ziegler—that heart aneurysms develop or rupture occurs. Small areas of this kind from obstruction of small twigs of the coronaries may scar over and be classed as one of the causes of the fibroid heart, the so-called chronic fibrous myocarditis. Such small obstructions are, perhaps, the cause of certain slight attacks of angina, of some of the “sticking pains” in the heart region.

The clinical picture presented by an obstruction of a coronary or one of its large branches—usually the descending branch of the left coronary—may be best described by the recital of a case that came under my observation last year. A man between fifty and fifty-five, supposedly in good health, was seized an hour after a moderately full meal with severe pain in the lower precordial region. He was nauseated and, believing something he had just eaten had disagreed with him, he induced vomiting by tickling his throat. The pain continued, however, and his physician was called, who found him cold, nauseated, with small rapid pulse, and suffering extreme pain. He washed out the stomach and gave morphia hypodermically. The pain did not cease until three hours had

passed. From this time the patient remained in bed, free from pain, but the pulse continued rapid and small, and numerous rales appeared in the chest. When I saw him twelve hours from the painful attack there was a clear, calm mind, a moderate cyanosis, a chest full of fine and coarse moist rales, a running, feeble pulse of 140. The heart tones were very faint and there was a most startling and confusing hyperresonance over the chest, the area of heart dullness being entirely obscured. The abdomen was tympanitic. The urine was scanty, of high specific gravity, and contained a small amount of albumin and a few casts. The temperature was subnormal, later going to 99 degrees. Occasionally there was nausea and twice a sudden projectile vomiting of considerable fluid material. This condition remained with slight variations up to the time of his death, fifty-two hours after the onset of the pain, though at one time the rales seemed nearly to have disappeared. A few hours before death the patient described a slight pain in the heart region, but said it did not amount to much. A remarkable circumstance, and one that occasioned surprise in those who saw him and who realized from the almost imperceptible pulse and the feeble heart tones how weak the heart must be, was the fact that the patient not infrequently rolled vigorously from side to side in the bed, or sat suddenly bolt upright, or reached out to take things from the nearby table, and once, feeling a sudden nausea, jumped out of bed, dodged the nurse and ran into the bathroom, where he vomited, and yet seemed none the worse for these exertions.

The heart in this case was of normal size, but both coronary arteries were markedly sclerotic, with calcareous districts and narrowing of the lumen. A short distance from its origin the left coronary artery was completely obliterated by a red thrombus that had formed at a point of great narrowing. The wall of the left ventricle showed well-marked areas of yellowish and reddish softening, especially extensive in the interventricular septum. At the very apex the muscle was decidedly softer than elsewhere.

The beginning of the aorta showed a few yellowish spots, these areas becoming less marked as the descending part was reached.

An acute fibrinous pericardial deposit, which showed no bacteria in smears, was found over the left ventricle. The pericarditis probably explains the slighter pain complained of a few hours before death.

There was marked edema of the lungs. In other respects the anatomical findings were those of health.

There is nothing new in fact that coronary obstruction may cause death. The rather startling fact is that after a sudden blocking of the artery a patient may live for many hours. Since seeing this case I have taken pains to watch more closely the anginas of this type that have come under my notice, and have looked up the

subject in the reports by others, and I am convinced that cases of this nature are not so very uncommon, and that at times it may be possible to recognize this condition at the bedside.

The clinical picture must be somewhat imperfectly drawn until a larger number of cases with autopsy control are available. Obrastow and Straschesko have quite recently discussed the condition. Some of the salient features seem to be the following:

The pain when the closure takes place is sudden, severe and the attack is prolonged. This latter fact is perhaps of significance. The patient may be one who has had anginal attacks before, or, as in the history just reported, the seizure may be the first one. In the former case the patient will realize the greater severity of this attack and often its greater duration. The pain does not necessarily radiate to the neck and left arm, though this is common. Epigastric distress, nausea and vomiting, shock and collapse, with a small, rapid, perhaps irregular, pulse may make one think of some subdiaphragmatic accident, such as hemorrhagic pancreatitis, perforation of gastric ulcer, diaphragmatic hernia. And the confusion is not cleared up by the acute emphysema of the lungs that may develop with numerous moist rales as in pulmonary edema. What may also greatly mislead one is the way in which the heart after the initial shock may for a time recover its tone and be able to perform its work with a fair degree of efficiency. I am familiar with the case of a man of about sixty, who, three days after his seizure, of the character just described, walked—with some dyspnea—on the street for several blocks, though dying suddenly the fifth day. The obstruction in the left coronary and the muscular softening found at the autopsy were similar to those in the case I have described. In five other instances that I have seen, though the autopsy control is lacking, the history has been so similar to these others that I am quite sure the same pathologic condition was present. In all of these, previous angina had been present, and there was some evidence of peripheral arteriosclerosis. In all the final attack was the severest ever experienced by the patient, was longer and was relieved only by morphine, nitroglycerin being unavailing. In all the sudden development of weak, rapid pulse, with feeble cardiac tones, was a striking feature. In one the heart dilated. Dyspnea and cyanosis varied in degree. Rales, as in edema of the lungs, were present. Emphysema was variable. Only one patient left his bed after the attack. His pulse showed a great improvement in quality and rate, though dyspnea, rales, edema of the legs, etc., showed cardiac failure. The cardiac weakness in one man was extreme from the onset to his death, some twelve days later and slight movement in bed brought on precordial distress and dyspnea—status anginosus. From the time of the obstruction—time of seizure—to

death was in one case three days, one seven, two twelve, and one twenty.

No recurrence of pain took place in any save the one case where there was the anginose state.

I have found in the literature a number of records of somewhat similar cases, and experimental work bearing directly on this type of accident is not lacking. At another time I hope to present a fuller discussion of this subject.

I am painfully aware that this address has been discursive and that it is open to criticism on the score of violating some of the unities. I have touched upon several topics connected with the heart that have rather urgently been brought to my attention in the last few years frequently because they have proven perplexing to others. It is hoped some of these perplexing subjects may have been presented in a little clearer light.

The general practitioner as he reads of new instruments of precision or of improved methods of diagnosis feels keenly his remoteness from the hospital, the laboratory or the medical circle where such work is going on, and, conscious of his lack of first hand definite information concerning these innovations he often distrusts his own power or shrinks from voicing his opinion, based as he thinks on knowledge that is defective and seriously incomplete. This address, if it accomplishes its aim, will encourage the specialist and the research worker to go forward with the use of the newer instruments and with the investigations by which new facts concerning the heart will come to light, but it will also, I trust, encourage the general practitioner to retain some of his old self confidence and not to lose faith in his powers of observation and in his ability to analyze subjective symptoms and believe that by the well established methods of physical diagnosis the pathological, anatomical and physiological conditions in the heart may still be fairly well understood. If these objects have been accomplished, the charge of discursiveness and lack of unity of purpose will lose some of its sting.

John B. Murphy, M. D.—There is not a sufficient number of competent medical men to treat all of the medical cases, nor of surgeons to do all the operations, of obstetricians to attend all of the confinements, nor of specialists to meet all of the special demands. What we need is a lesser generalization of patients in diagnosis and treatment and a closer individualization of the special conditions and demands. What the patient needs is relief of his symptoms. If this were done and efficiently done, every doctor in this great land would be overworked and self-satisfaction in the practice of medicine would be a rarity.

Competency is only attained and maintained by zeal, indefatigable labor and continued efforts in self education. The responsibilities of his profession rest on the individual man. If he shrinks from its weight the burden grows doubly heavy. If he "short cuts" for success he sinks into the mire of dishonesty and dishonor. If he carries the weight with an erect figure, abiding integrity and a strong heart, it rides like a bubble.

Section in *Medicine*

REPORT OF CHAIRMAN.*

CLARENCE VAN EPPS, M. D., Iowa City, Iowa.

The most important and significant advance of the past year has been the development of the drug, in a manner never before so efficiently attempted. The discovery of an active drug is an important event, and especially so if it happens to be one of wide applicability as is the case of salvarsan. The broader significance of the discovery lies in the method of its development. Writing so recently as 1902 Schmiedeberg, said; "The relation of therapeutics to pharmacology is obvious, in so far as the former is based on a scientific foundation. This however, is very far from being the case. Everywhere pristine empiricism is in the mastery, entirely unconfined by any scientific barriers." No doubt for years to come empiricism will continue to dominate our treatment of disease. There are not wanting however signs of a growing interest in rational therapeutics. A vast amount of research is being undertaken with the object of elucidating such relationships as may exist between the chemical structure of a drug and its physiological action. Large industries are established for the production of synthetic drugs, the actions of which are more or less accurately predicted from their chemical structure, and some space is devoted to the subject in the text books and medical press.

Many obstacles have prevented a more rapid advance of rationalism. These have had to do first with the drugs, in relation to their solubility, volatility, degrees of dissociation, speed of absorption and elimination, and second, with our ignorance of the chemistry and reactivity of the living cells. Any attempt to calculate the result of a chemical reaction in which the constitution of only one of the bodies concerned is known, is obviously an undertaking destined only to a partial measure of success.

The action of a drug appears to depend upon its possession firstly, of some group of atoms capable of exerting a specific effect on the cell; and secondly, upon a group capable of entering into some kind of a physico-chemical relationship with certain cells whereby the first group is enabled to produce its action. The second group is commonly known as the 'anchoring group'.

The selective action of drugs must depend upon difference in the cells and these are presumed to arise in the presence or absence of certain side chains or receptors known as chemoreceptors. Theoretically the active constituents of a drug can only affect a cell when the relation between the anchoring group and the chemoreceptor is analogous to that of a lock and key.

*Iowa State Medical Society, Sixtieth Annual Session, Des Moines, May 17-19, 1911.

Foremost among the students of specific chemical therapeutics must be placed Professor Paul Ehrlich. While still an undergraduate, his mind was turned to this question by reading a work of Heubel on lead poisoning. His later studies upon the leucocytes, intra-vitam staining with methylene blue, and abrin and ricin immunity, led him to the conviction that for each specific parasite a specific curative drug must and could be found. In his search for a drug that might cure the trypanosome infections Ehrlich, reached two important conclusions; one, that all chemicals exerting a curative effect upon these infections are poisons, that is, if given in sufficient dose, they are capable of harming the vital organs of the host. The affinity of the medicament for the parasite is called parasitropism, that for the host, organotropism. To be of practical value the ratio of the first to the second must be such as to allow destruction of the parasite without dangerous effect upon the host.

The second conception was, that a poisonous action upon the parasite is impossible unless the substance can be attached or fixed to the same.

The action of the drug may be examined in a test tube or in an animal. Experience has shown that the behavior of a drug in a test tube may offer no clue as to its activity in an animal. This may be due to the organotropism being much stronger than the parasitropism, or the formation of secondary products.

We may mention the following conditions as essentials to efficient chemotherapy. A substance must be obtained which has some action upon the parasite we wish to destroy. The active groups in the drug are ascertained and variations introduced with the hope of increasing the parasitropism and lessening the organotropism. In the selection of the best medicament several points must be borne in mind.

1. It must be safe, that is the ratio of the curative dose to the toxic dose must leave a large margin of safety: 2. It must be efficient. 3. It must be convenient. 4. It must be rapid and sure.

To test the drug we must select: 1. Uncomplicated cases. 2. Cases previously untreated. 3. Early cases.

They must be treated under favorable conditions including: 1. Rest in bed. 2 Regulation of the diet and bowels. 3. Keeping a careful T. P. R. and symptomatic record.

The treatment may be given either by the intermittent, or energetic method. Against the intermittent method are: 1. It is ineffectual; the first dose being insufficient, the next is not less so. 2. The danger of producing hypersensativity. 3. The production of resistant strains of the parasite making a cure difficult or impossible.

The energetic method consists in giving a single large dose or two large ones within 48 hours.

Most important in the work of Ehrlich is the knowledge which allowed him to 'aim' a drug at a parasite. The 'aiming' depends upon a knowledge of the significance of chemical structure. The application of this knowledge is best illustrated by following the development of salvarsan.

In 1903 Ehrlich employed atoxyl in his trypanosome researches, but found the drug inert in his test tube work and discarded it.

In 1905 came the discovery of the spirocheta pallida by Schaudinn and the publication of the work of Thomas and Brienl upon the therapeutic value of atoxyl in the trypanosome infections. Ehrlich immediately took up the study of atoxyl and was the first to discover its true structure, now known technically as the sodium salt of para-amidophenyl arsenic acid. By remoulding and encroaching upon the amido group he developed a large number of combinations all derivatives of phenylarsenic acid. Guided by analogy and in part, he claims, by instinct, he was learning to shoot, and to do so by means of chemical variations. After years of effort he finally developed salvarsan, a drug with marked destructive action up many spirochetes and trypanosome infections, with little organotropism, and one whose use is not attended by insuperable difficulties. Ehrlich considers that the entire axis of progress lay in the explanation of the constitution of atoxyl. We wish to again mention that the vital thing in the whole series of events, is the fact that Ehrlich was aiming, by means of chemical variations. The actions of salvarsan in the various trypanosome and spirochete infections is no more wonderful than that of cinchona in malaria. The difference lies in the method of discovery. One is the result of a carefully directed activity, the other of an empiricism such as is possible in the savage.

We may summarise the present status of salvarsan in the treatment of syphilis as follows:—1. The time that has elapsed since its discovery is still too short to allow judgment as to the permanency of its curative action. The report of two cases of reinfection by Schreiber and one by Milian show the possibility of a complete cure. 2. The preferable method of administration is the intravenous because of its definite dosage and painlessness. 3. Two and possibly three injections are required, the Wasserman being taken as a guide to the necessity for the third. The optimum intervals of injection are still unsettled. 4. The average amount is from 1 to 1.5 grams in divided doses. 5. The combination treatment with mercury will probably be the method of the future. (J. A. Fordyce N. Y. Med. Jr. May 6th, 1911.) 6. The drug is contraindicated in a, organic heart disease; b, vascular degeneration; c, old cerebral hemorrhage; d, senility; e, nephritis; f, diabetes. 7. The best results are obtained in mouth and throat affections, mucous membrane lesions, secondary and tertiary skin lesions, malignant lues, congenital lues

and cases obstinate to mercury. 8. The drug is of little value in general paralysis of the insane. 9. The result in tabes are discrepant. In an early case which has not undergone thorough mercurial cure the drug is advised. Ehrlich here recommends repeated small doses. 10. A very small per cent of cases prove refractory. 11. The reported relapses vary from .5 per cent to 6 per cent; this is probably due, at least in part, to the variations in technique. 12. By systematic reinjection we may hope for a negative Wasserman in 90 per cent. 13. The spirochetes disappear in from 12 to 72 hours, making the drug important in epidemiology, whatever its curative value. 14. There are twenty reported fatalities. Six occurred in infants and several in G. P. I. Ehrlich accepts only one death as definitely due to the drug, that of laryngeal lues reported by Spiethof. 15. Neither luetic nor non-luetic ocular involvement contraindicate the use of the drug. 16. The local reaction (Herxheimer reaction) is due to insufficient dosage and a resultant stimulation of the parasite. 17. Mercury will not do all that salvarsan will. Wasserman reports that his test becomes negative in only 50 per cent of the cases thoroughly treated with mercury. 18. Wechselsmann in a report less than a month old claims to have proven that the reaction after intravenous injection may be reduced almost to nil by the use of sterile apparatus and a freshly sterilized normal salt solution. The reactions are so slight that he feels the method nent is, firstly, the recognition of the importance of typhoid carriers. with no opposition.

Typhoid Fever.

The continued presence of typhoid fever has in the past year led to increased efforts for its elimination. Among the most pertinent is, firstly, the recognition of the importance of typhoid carriers. Four per cent of those having had the disease become carriers for from weeks to years. Not only may those recovering from the disease become carriers but also those who have not had the disease. Sacquepee estimates that in an epidemic eight per cent of all cases are due to carriers. Some Prussian hospitals do not dismiss their typhoid cases until two negative bacteriological reports upon the feces and urine have been obtained. The Massachusetts Association of the Boards of Health has recently made the following recommendations: 1. All typhoid cases should be isolated and placarded. 2. People whose occupations may lead to food infection should not be released until four negative cultures have been made from the feces and urine. 3. Bacilli carriers should not be allowed to engage in occupations necessitating the handling of food. 4. All carriers should be under the closest supervision of the Board of Health. The treatment, medical or vaccine, of the typhoid carriers has been far from successful. In the absence of quarantine and re-

lease tests, instruction as to the disinfection of the stool and urine and the prevention of entrance into occupations whereby they may endanger others, appear to be most practicable.

A second important advance in the control of typhoid is the resolution just presented to the National House by Congressman Sulzer of New York. This resolution is the first move in a national campaign prohibiting the drainage of sewage into fresh water lakes and streams. National jurisdiction in this matter is limited but the inception of such movement by the national government will be of immense educational value.

The third important fact is the increasing evidence of the efficiency of antityphoid vaccination as a preventive. The method has been employed for thirteen years in the British army and for a shorter time in others. In general, the mortality in the British armies has been reduced to one-fourth. In one series of twelve thousand men, one-half vaccinated and the other half not, the mortality was thirteen and one-half times higher in the unprotected. The method has been employed extensively in the United States army during the past three years. A most brilliant demonstration of the efficacy of good hygiene combined with good vaccination is a comparison of the record of the division now in Texas with that of the army at Chickamauga in 1898. Over a period of eight weeks only one case of typhoid has developed among 18,000 men in the present campaign, this was an unvaccinated teamster. At Chickamauga, 16 per cent. of the men were infected within a similar period. The method consists in giving subcutaneous injections three times repeated at intervals of ten days, of 500, 1,000 and 1,000 millions respectively of killed typhoid bacilli. There are practically no untoward results, the reaction being much less than that after anti-small pox vaccination. Some have feared to apply the method during an epidemic because of a suspected negative phase with increased susceptibility following the vaccination. No foundation has been found for these fears.

Acute Anterior Poliomyelitis.

Because of the increasing frequency of acute anterior poliomyelitis, it is deemed proper to make a brief note on this condition. The occurrence of 186 cases in Iowa in the first eight months of last year make it important for us to recognize the disease and learn what is known of its prevention.

In addition to the typical form there are now described the following: 1. The ascending or descending type. 2. The bulbar or pontine type. Any of the cranial nerves may be involved but most often it is the facial. 3. The central or encephalic type; this is very rare. 4. The ataxia type. 5. The polyneuritic type, or that associated with marked pain and tenderness in the extremities.

Post mortem examinations have failed to reveal a peripheral neuritis and clinically there is no loss of sensation. 6. The meningitis type. This condition may so closely simulate a cerebro-spinal fever that a lumbar puncture will alone allow the differentiation. 7. The abortive forms in which the motor symptoms are slight. Nausea and vomiting associated with diarrhoea or constipation are prominent in some cases. pain in the back of the neck or extremities, with hyperesthesia, is very common. Four sub-types have been described: a. Those with symptoms of general infection. b. Those with symptoms of gastro-enteritis. c. Those with pain and hyperesthesia. d. Those with meningitic symptoms.

In a given epidemic, the abortive cases commonly follow one type, the meningitic and neuritic forms being the most common. The abortive cases vary in per cent. of frequency from 15 to 65 in the different epidemics. In the Hancock Co. epidemic of last May, there were thirty cases. Of these Frost reports that 25 were abortive. The same writer considers that in general, the abortive cases are as frequent if not more so than the frank ones.

Unquestionably the disease may be transmitted from one patient to another by contact or by means of a healthy carrier. In the Massachusetts epidemic most of the cases occurred in old houses and nearly one-half gave a history of wading or swimming in sewage contaminated water.

One pathway of infection and elimination of the virus is the nasal mucosa which may be infective weeks and months after subsidence of the acute symptoms.

The treatment consists of: 1. Isolation until three weeks after cessation of the fever. 2. Frequent spraying of the naso-pharynx of the patient and of those in contact with him, with a 2 per cent. solution of hydrogen peroxide. 3. The internal administration of hexamethylenamin. 4. The disinfection of all discharges. 5. House fumigation. 6. Thorough sprinkling of the streets during an epidemic.

One attack usually confirms immunity. Studies with immunisation have been made. It has been found that the sera of recovered patients and animals are protective against experimental inoculations, the injection being made into the spinal sub-dural space. The only animal in which the disease can be reproduced and from whom a protective serum can be obtained, is the monkey.

J. B. Deaver—Chronic pancreatitis may be suspected of having complicated gall-stone disease when the symptoms point to severe recurrent disease of the choledochus with marked emaciation and disturbance of the carbohydrate metabolism or evidence of insufficient action of the pancreatic ferments on the food in the intestine. This liability of the pancreas to involvement by gall-stone disease is a strong argument for early operation in biliary infections or cholelithiasis.

ETIOLOGY AND PATHOGENESIS OF ANEMIA.*

C. P. HOWARD, A. B., M. D., Iowa City, Iowa.

PROFESSOR OF THEORY AND PRACTICE OF MEDICINE, STATE
UNIVERSITY OF IOWA.

The old division between primary and secondary anemias is fast disappearing as one by one the so-called primary forms are relegated to the secondary class. Long years of painstaking, clinical, pathological and experimental research by many workers in Europe and America have been responsible for this. Even the distinction between Biermer's and Addison's anemia, as emphasized by Hunter is fast disappearing and no doubt the time is not far distant when all anemias will be considered secondary and none primary or idiopathic in origin. We still, however, are not quite within reach of our ultimate goal and must admit that while the bulk of anemias can now be classed as secondary or symptomatic, there is quite a large group of cases that are for the time at least, best considered as primary or idiopathic, e. g., chlorosis and many cases of so-called progressive pernicious anemia.

Some confusion has arisen from the emphasis laid by some hematologists upon the blood picture as a point of distinction.

By the primary anemia blood picture one implies a more or less marked anemia with a high color index, a variation in the size, form and the staining reaction of the red cells, and the presence of one or more types of nucleated red cells.

In secondary anemias the blood picture is characterized by a moderate oligocytosis, a more or less marked achromia with low color index, slight or moderate poikilocytosis and anisocytosis, moderate polychromatophilia, an occasional normaloblast, and rarely a megaloblast.

The same cause can produce the primary or secondary blood picture.

Labbe and Salomon say it is impossible to fix the point at which pernicious anemia begins. Ehrlich says a blood which shows 2,000,000 or less red cells, per c. m. m., may be considered of the pernicious type. The former authors have a much wider conception and include all anemias with progressive loss of red cells, with or without remissions or fatal termination as pernicious anemias.

Further confusion has arisen from the use of the term idiopathic anemia (in the strict Addisonian sense) as interchangeable with the term progressive pernicious anemia of Biermer. The former is meant to signify a large class of cases with a primary blood picture and a cryptogenetic origin, and the latter includes all anemias whether of known or unknown origin with a high color index and a markedly pathological condition of the red cells of the circulating blood. Quinke in 1876 wrote: "Etiologically, there

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appears to me to be no ground whatever for separating pernicious anemia from other forms of anemia." Most of the German as well as the French hematologists have accepted this conclusion of Quinke.

One must admit the impossibility to differentiate between the primary and secondary blood picture except by the high color index in the former. Further, that as both blood pictures may be secondary to a definite assignable cause, one should give up the terms primary and secondary anemia as designating hematological differences and use them in the etiological sense only. It is therefore, better to classify anemias into 1, secondary anemias, which may exhibit any blood picture according to the severity of the disease process, but in which there is some definite etiological factor; 2, chlorosis, a condition which is characterized by a very low color index and a slight oligocytosis, but in which the etiology is obscure; 3, idiopathic pernicious anemia, or better, cryptogenetic pernicious anemia in which there is a high color index, a marked oligocytosis and in which none of the common causes for anemia are to be found.

I. Secondary or Symptomatic Anemias.

In this type "the normal erythroblastic functions are strained to their utmost and are sending out cells in a more or less immature condition, while yet no radical changes have taken place in the type of blood formation."² Postmortem, we find the red type of marrow in the long bones: "the factory is working overtime."

All anemias due to a well recognized cause are generally classed as secondary. The blood picture of most cases is characteristic but it is not wise to consider the blood picture itself as pathognomonic, for, as we have said before, the same blood picture as is seen in chlorosis and some forms of etiologically secondary anemias may be seen in primary pernicious anemia.

As a rule these secondary anemias are mild but not always so, and certain of them may prove fatal (e. g., the anemia of hemorrhage, cancer and unciniariasis) though the blood picture remains of the secondary type. On the other hand, in the early stages, an etiologically primary anemia may be quite mild in its symptomatology but show a severe pernicious type of blood. Consequently, "The presence of a clear cause remains our only reliable criterion for the recognition of secondary anemia."

The causes may be grouped under the two heads; hemorrhage and hemolysis.

1. Hemorrhage may occur in a variety of circumstances. The chief factor here is not so much loss of blood cells as of the blood serum; hence, the rapidity of the loss rather than the amount is the more important factor in the production of symptoms, though the

diminution in hemoglobin and red cells may be the same in either case.

- (a) Traumatic or operative.
- (b) Pulmonary, as in phthisis.
- (c) Gastric, as in peptic ulcer, gastric cancer, ruptured varices of hepatic cirrhosis or Banti's disease.
- (d) Uterine from an extrauterine pregnancy, a miscarriage, fibroid tumors, carcinoma.
- (e) Intestinal, as in typhoid fever, dysentery, hemorrhoids.
- (f) Renal, as in calculus, acute nephritis or neoplasm.
- (g) Vascular, as in aneurism.
- (h) Subcutaneous and submucous, as in leukemia, purpura and scurvy.

The rate of the regeneration of the blood cells depends upon the regeneration powers of the erythroblastic tissue of the marrow. The latter may acquire the habit of rapidly making up for blood loss.

The two factors which determine the regeneration of the red cells after hemorrhage, are:

First, the amount of time permitted for the stimulation of the bone marrow to activity; second, the general body vigor,—the absence of some chronic disease as neoplasm, scurvy, nephritis, etc

2. Hemolysis. May be due to:

(a) Various infections, as in puerperal sepsis and other forms of septicemia and rarely in pernicious malaria.

(b) Neoplasms: In cancer the blood may bear a remarkable resemblance to pernicious anemia. Aubertin, as will be seen later, emphasized this point. But such cases must be considered as very rare. The usual blood findings here are those of the mild chronic secondary anemia, gradually increasing in intensity but remaining of the small cell type with a low hemoglobin index.

(c) Certain chemical poisons, as potassium chlorate, acetanilid, nitrobenzole, and ricin which produce acute anemias; and lead and arsenic which are more apt to produce chronic types of anemia.

(d) Autointoxication, as in uremia, cholemia and pregnancy, and lastly,

(e) Intestinal parasites, as unciniariasis and bothriocephalus latus; the latter may be associated with the blood picture of pernicious anemia or in some cases may present the picture of an ordinary secondary anemia.

That in all these cases the red cell destruction is the result of hemolysis is shown by the presence of jaundice, the detection of urobilin in the urine and also by experimental evidence.

II. Chlorosis.

Chlorosis is "a disease of unknown cause occurring only in young girls, usually between the ages of fifteen and twenty-five years, and producing moderately severe anemia."

One point of interest is that the disease is fast disappearing from America. Cabot was able to collect only 500 cases of chlorosis to 800 of pernicious anemia from the same hospital clinics. One can consider chlorosis, hematologically, as a secondary anemia without any demonstrable cause. It is a disease peculiar to the female sex and particularly young women.

As has been recognized since time immemorial, the sedentary occupation of domestic service seems to play some role at least as a predisposing factor. This is generally explained by the effect of the marked change from country to city life, an event so frequent at the outset of a domestic servant's career. By that one implies poor hygienic conditions, irregular and insufficient meals, poor ventilation and overwork. Further, chlorosis is apt to develop immediately after the establishment of menstruation and this fact, together with its occurrence in the female sex suggests some correlation.

Mesoblastic hypoplasia. Morgagni, Meckel, Rokitansky and Virchow, from their postmortem observations, suggested that the underlying factor was a congenital hypoplasia of the arterial system. This is supposed to indicate a like hypoplasia of the blood forming organs, hence the peculiar anemia. Others have not been able to confirm this. Further, as Cabot points out: "the fact that the disease can be promptly cured by the administration of iron", is against the arterial hypoplasia theory.

Bunge's hypothesis. He believes that "in chlorosis digestion is disturbed with the formation of sulphuretted hydrogen and alkaline sulphides in the bowel. These combine with and separate out the organic iron of the food and a sulphide is formed, an inorganic compound which, according to Bunge, cannot be absorbed; hence the blood loses its necessary supply of iron and chlorosis results." This hypothesis is controverted by Stockman for the following therapeutic grounds: 1, by treating chlorosis by iron subcutaneously with good results; 2, by mouth administration of sulphide of iron which cannot take up any more sulphur, and yet which has proved a satisfactory means of cure; 3, by administration of bismuth which has the power of neutralizing sulphuretted hydrogen but which is nevertheless quite inefficacious in the treatment of chlorosis.

Meinert thought that gastropotosis might be responsible for the chlorosis but this would hold true for a small percentage at the best. Probably even when present, gastropotosis is a result of the

secondary muscular weakness and laxity of the ligaments.

Infectious theory. As one might have anticipated, the infectious origin has been advanced on account of the slight fever and moderate enlargement of the spleen sometimes present. No infectious agent has been found. It has been, however, suggested that in chlorosis the anemia is due to a latent or unrecognized tuberculous. Such a theory is plausible but hardly compatible with the negative postmortem findings; and further, the course and favorable termination of chlorosis without antituberculous measures also are against it.

In the same way the relationship of hyperthyroidism to chlorosis can be answered.

No assistance has been received by the examination of the hematopoietic system according to Grawitz who found normal bone marrow in the tibiae of two cases.

Haldane & Smith have recently demonstrated a marked increase in the amount of blood plasma which results in overfilling of the vessels and an increase in the total amount of the circulatory fluid. This offers food for some interesting speculation as to the relation of this serous plethora and some of the symptoms of the disease.

Still more in chlorosis than in pernicious anemia is the etiology and pathogenesis an unanswerable riddle.

III. Progressive Pernicious Anemia.

Progressive pernicious anemia (Biermer), is also known under the name of Addison's anemia, Biermer's anemia, primary idiopathic (Addison), essential (Lebert), protopathic, and progressive anemia.

As we have already said, the same causes can produce a pernicious anemia as the symptomatic or secondary anemia. The French school of hematology represented by Aubertin, Labbee and Solomon³ go still further and say that pernicious anemia is a syndrome or symptom complex and not a disease "sui generis."

There is a long list of evident or 'phanerogenetic' factors which are supposed to account for the pernicious type of the anemia. Labbe and Salomon admit that there are some additional factors necessary for these phanerogenetic factors to lead to a pernicious type of anemia. These are: 1. an excessive intensity of the morbid cause; 2. the localization of the infection, for example, the presence of the malarial plasmodia in the marrow; 3. the duration and repetition of the morbid cause; 4. accumulation of the morbid conditions; 5. predisposition. Bunting⁵ does not consider it necessary to assume any specific predisposition to anemia, at least not with a pathological marrow as a basis, and emphasizes rather "a disproportion between the resisting power of the in-

dividual and the strength of the pathologic agent producing the anemic state."

Supposed etiological factors:

1. Pregnancy and the puerperium. Some authors insist upon the important role of many and quickly repeated pregnancies. Cabot found 18 cases in his series of 1200 in which the disease began during pregnancy or shortly after the birth of the child. There were 17 other cases which he classified as posthemorrhagic. He believes that anemia in the pregnant woman is the result of hemolysis due to an autointoxication brought about by her state as shown also by nephritis, eclampsia and pernicious vomiting. He, however, excludes them from the cryptogenetic type of anemias. Labbe and Salomon, too, write that pregnancy as a cause of severe anemia is much exaggerated. Lazarus quotes Ahlfeld,⁶ and Bunting⁵ cites J. Whitridge Williams who emphatically state they have never seen a case in their obstetrical practices

2. Menopause. As the disease is as likely to occur between 35 and 45 in men as well as in women, and as many occur before the menopause, there is no reason to connect the anemia with the cessation of menstruation.

3. Malaria. While there was a history of malaria in 90 of Cabot's series, there were no cases in which the characteristic blood picture developed during an attack. Nevertheless, Ewing of New York, Morse and the Italian clinicians Bignamini and Dionisi, have described typical pernicious anemia during the course of a malarial infection. Yet all must admit that in an overwhelming majority of cases the developing anemia is of the secondary type.

4. Syphilis. Only three cases could be found in the literature by Cabot of the typical pernicious anemia occurring during the active stage of lues. Symptomatic secondary anemia not uncommonly develops during the disease. Klein, Mueller and others have seen anemias of the pernicious type in both the secondary and tertiary stage of syphilis, though chiefly in the latter.

5. Tuberculosis. Hayem, Dumas, Pater and Rivet have seen pernicious anemia during the course of tuberculosis. So has the present writer. Recently a young man 28 years of age was referred to Dr. Van Epps who sent him to the University clinic. He had a slight apical lesion and tubercle bacilli in his sputum, which was, however, overshadowed by a marked anemia with high color index. a leucopenia, poikilocytosis, anisocytosis and the presence of a few normoblasts, and an occasional megaloblast. Further, he had one of the most typical pictures of the toxic combined sclerosis that we have ever seen. While under observation a pleurisy with effusion developed, the anemia became more and more marked but always of the primary pernicious type, and the cord lesions resulted in a

complete disability of arms and legs with ataxia, anesthesia, astereognosis, etc. At postmortem a well defined tuberculosis of the lungs and pleura was found; the bone marrow of the femur revealed a replacement of three-fifths of the fat by lymphoid and erythroblastic tissue with a great number of megaloblastic cells. The cord showed the typical picture of a toxic sclerosis.

Whether these were two independent and coincidental diseases, or whether the primary disease was the tuberculosis which resulted in a symptomatic anemia of the primary type, would be answered differently by the Continental and American hematologists.

6. Bacterial infections other than tuberculosis or lues may cause severe anemias. Quinke, Rosenstein, Hayem, have each reported a case of pernicious anemia following typhoid fever.

7. Cancer, but more particularly carcinoma ventriculi may cause a severe anemia. While most are agreed that there is as a rule no difficulty in recognizing the difference between the severe anemia of cancer and that of pernicious anemia, Menetrier and Aubertin, Engel and some of the older English school, deny that there is any difference clinically, hematologically or anatomically between the severe anemia of cancer and that of any other origin. In any case there may be several other factors at work in the production of the anemia of cancer of the stomach, namely repeated hemorrhages, digestive disturbances, and the hemolytic poison produced by cancer cells.

8. Gastro-intestinal disorders. Pernicious anemia is often preceded by dyspepsia, especially that form known as achylia gastrica. Further, an atrophy of the gastric tubules was present in 61 of Cabot's cases at autopsy but this may be due, he admits, to post-mortem changes. One must agree that as a large number of cases do not show it, there is no reason to suppose that it is the cause rather than the result of the anemia.

Nothnagle, Heubner, Habel and others regard this atrophy not as a pathological process, but in the nature of a "pseudo-atrophy" brought about chiefly through the influence of intestinal distension either during life or postmortem.

Following Meyer's suggestion, Faber and Block found no atrophy of the alimentary mucosa if the peritoneum were injected with a formalin solution immediately after death and so the post-mortem distension prevented.

Further, as pointed out by Faber and Bloch, the symptoms of gastric atrophy manifest themselves in some cases before the anemia, in others simultaneously, and in still others not till some time afterwards, that is a similar time relation to that presented by the spinal cord symptoms in pernicious anemia. Hence, these authors regard the blood lesion, the gastric lesion and the cord lesion as due to a common cause.

Ewald describes an "anadenie" of the gastro-intestinal tract but Schmidt could find no less of gland tissues in the intestines. Hunter¹ is a strong supporter of the role of the gastro-intestinal tract in pernicious anemia but more particularly of the portion, viz., the mouth and buccal mucous membrane. Mosse⁸ and Berger⁹ have both noted a high grade of inflammatory infiltration of the gastric and especially of the intestinal mucosa with some degeneration of the epithelium of the glands but no glandular atrophy.

9. Intestinal Parasites. Hoffmann and Schauman have shown that an anemia identical with the pernicious cryptogenetic anemia may be found in association with the presence of the fish tape worm (*bothriocephalus latus*). This acts in two ways probably, first by the constant withdrawal of blood from the intestinal wall and secondly by the introduction of a poison into the blood of the host, which poison has been shown experimentally by Schauman and Tallquist to be strongly hemolytic in its action.

It is probable, too, that *ankylostoma duodenale* (*uncinaria*) may in certain rare cases produce a primary anemia though it is usually of a secondary type.

10. Hemorrhage. Small hemorrhages repeated over a long period of time and due to gastric or intestinal ulcers or hemorrhoids, might give rise to a true pernicious anemia, writes Cabot. Dickman, Habersohn, and Quinke are strong supporters of this view. Stockman attributes so-called idiopathic pernicious anemia to repeated minute intestinal hemorrhages. Bunting's⁷ experimental work does not support this for he states: "with repeated hemorrhage and a constant fall in the red cells, there is no sharp nucleated red cell crisis; megaloblasts are not found in the circulation and normaloblasts but occasionally after the first reaction. The color index falls rapidly, the corpuscles becoming extremely pale and the marrow has the characteristic picture seen in cases of secondary anemia where the nucleated cells of the normaloblastic type are the predominant cells." Most are agreed that in pernicious anemia the amount and frequency of the hemorrhages are not sufficient to account for the intensity of the anemia.

11. Nervous shock. Intense mental and nervous shock or strain have been emphasized by some authors but is present in but a small number of the cases.

12. Nephritis has also been reported as a cause of a severe anemia by Labbe, Jacob and Salomon. They believe that nephritis results in a marked dilatation of the blood vessels and eventually possibly in an anemia.

13. Lead was noted to produce a very severe anemia of the progressive pernicious type by Malassez, Hamel and Labbe.

14. Cryptogenetic. While one must admit that any of the above conditions may be associated with or followed by a severe

progressive and fatal anemia, and even in some instances with a primary blood picture, yet there is still left a large number of cases in which no definite etiological factor can be found either in the previous medical history, in the clinical examination, or even in the postmortem findings. This is the so-called cryptogenetic pernicious anemia as was evidently first meant by Addison⁴ in his original communication. The possible explanation of this large group of cases will now be discussed.

IV. Pathogenesis of the Cryptogenetic Type of Pernicious Anemia.

1. Anhematopoiesis is imperfect blood formation due to some poison or poisons acting upon the bone marrow, lymph glands, and the other hematopoietic organs.

This theory dates from 1876 when the hyperplasia of the bone marrow was first noted by Cohnheim. It received additional support in 1880 when Ehrlich called attention to the presence of macrocytes and megaloblasts in the blood. There are many who today still adhere to the theory that "this reversion of the bone marrow to an embryonic type is the primary cause." Bloch in 1904 well expressed this view: "Biermer's anemia rests almost on an asthenic condition of the hemopoietic system, usually congenital, as a result of which the red blood cells are insufficient for their function or of a more unstable structure (chemical and physical) and, therefore, less resistant to injurious agents."

This theory receives most support in the so-called aplastic type of anemias which is, however, very rare. Even here, blood destruction is the chief factor for the liver and spleen in these cases also show signs of severe cellular destruction.

The changes in the bone-marrow that exist in all cases of severe anemia are generally now to be regarded as the result and not the cause of the anemia. The rare cases of myelophthisic anemia due to a destruction or replacement of the marrow by bone, fibrous tissue or malignant disease, belong to a different group to that of the cryptogenetic anemias.

2. Hemolysis. This theory receives especial support in the so-called plastic type of pernicious anemia, i. e.—a severe anemia with some evidence of an attempt of regeneration.

Various poisons, bacterial, parasitic, cellular, or chemical originating in various localities but especially in the gastro-intestinal tract act as hemolytic agents.

Nevertheless, the blood serum of pernicious anemia cases has never been shown to be hemolytic. Further, the destruction of red blood cells does not depend upon their want of resistance as has been proved experimentally.

The presence of large amounts of iron in the liver of pernicious anemia together with the finding of hemosiderin in the kidneys, and the determination of an excessive excretion of hydrobilirubin

by the kidneys, especially during the exacerbations of the disease, as well as the determination of hemoglobin and hydrobilirubin in the plasma of the circulating blood, are all evidence in favor of a red blood cell destruction, in other words, a hemolysis. Hunter, Ehrlich, Bunting and others are strong supporters of this view. Hunter, indeed, has gone further than the others and believes pernicious anemia is a chronic infection localized in the gastrointestinal tract, caused by a definite infection of certain of its parts, but especially the stomach, and characterized by intermittent destruction of the red blood cells. Inasmuch as Hunter's theory entirely disregards the bone-marrow alteration and only emphasizes the causal relation of the destruction of red cells in one field of the circulation, it falls short of a complete explanation.

Ehrlich and Lazarus ⁶ conclude that the anomaly of blood formation and the increased blood destruction are the coordinate results of the same cause. "This cause, inasmuch as we have no other explanation for the megaloblastic transformation of the marrow than the presence of some toxic substance, we will assume to be the formation of toxins which have the capability of influencing the marrow in a specific manner."

Bunting accepts the following theory as most nearly approaching the solution, namely, "the absorption of a toxic substance, probably of an intestinal origin which acts on the circulating blood producing hemolysis and through the circulation also on the marrow, resulting in a faulty hyperplasia." He further believes with Hunter that it is not improbable that this toxin is a result of gastrointestinal infection. He cites as other evidences of a circulatory toxin the cord lesions, the atrophy and degeneration of the gastric tubules and the multiple capillary hemorrhages which resemble those due to snake venom.

Bunting and others produced in rabbits and dogs by the intravenous injection of large doses of myelotoxic and hemolytic sera, saponin and ricin, an anemia which in its severity and blood picture presented all the features of the severe pernicious type. Moreover, the bone marrow, just as in man, showed a preponderance of the megaloblastic type of nucleated red cells and of cells of the large lymphocytic type. The hemolytic action was shown in addition by a hemoglobinuria and by deposits of pigment in the spleen and lymph glands.

If, however, these hemolytic substances were injected subcutaneously or intraperitoneally, the result was quite different. Hemolysis occurs, it is true, as shown by deposition of blood pigment in the spleen and the reduction of the red cells, but unless very large doses are used there is no nucleated red cell reaction in the blood and the marrow shows a preponderance of normaloblastic cells characteristic of a secondary anemia.

On the evidence, then, of experimental work, Bunting⁷ concludes that pernicious anemia is due to the absorption into the circulation of a substance of hemolytic power toward human red blood cells, and in such quantities that it produces not only destruction of circulating red cells but also destruction of and injury to cells of the erythrocytic groups in the marrow.

On the other hand, in secondary anemias, there is a loss of red blood cells or a destruction of red blood cells by toxins. In either case the marrow is only stimulated to respond in a normal manner with the orderly production of non-nucleated red blood cells. At some point in the disease, however, the amount of toxin may be so increased that the marrow becomes injured and the blood picture presents the pernicious anemia type.

Tallquist isolated from an extract of the *bothriocephalus* a lipid substance which was actively hemolytic. Morgenroth found a similar hemolytic lipid substance in the mucous membrane of the alimentary tract and in the viscera of dogs.

Berger and Tsuchiya⁹ searched for this substance in the gastrointestinal mucous membrane of two typical cases of pernicious anemia. They successfully extracted, in ether a lipid substance which was ten times more strongly hemolytic *in vitro* than a similar lipid substance found in the normal mucosa of man. When introduced into ordinary laboratory animals by feeding or beneath the skin, it was more hemolytic than the normal lipid substance and produced an anemia with all the characteristics of the pernicious type.

Further, in dogs in which a severe gastro-intestinal catarrh was artificially produced a lipid substance was demonstrable which in its hemolytic and anemia-producing quality resembled that isolated from the mucosa of human pernicious anemia cases.

The conclusion seems justified, according to Berger and Tsuchiya that the cryptogenetic form of pernicious anemia is to be referred to the blood-destroying quality of this lipid substance with a subsequent secondary insufficiency of the bone marrow.

The place of origin of this lipid substance is most probably in the gastro-intestinal mucosa, the cause of which is to be sought in a chronic catarrhal inflammation of the mucosa which exists with varying intensity in different regions of the digestive tract. Further that a disease so common as the gastro-intestinal catarrh is not more often followed by pernicious anemia is explained by the compensatory function of the bone marrow which replaces the destroyed red cells; that only when the bone marrow can no longer meet the demands does the pernicious anemia picture appear; that it requires either a very chronic or a very severe process to produce a pernicious anemia.

In conclusion, we believe that all must agree that we are fast approaching a clearer understanding of the pathogenesis of all

anemias and that the time is not far distant when the scientific light will invade even the dark recess of the so-called cryptogenetic anemias.

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It is a notable fact that the diseases of old age are increasing. Pneumonia, cancer, apoplexy, etc., deserve especial notice that the figures may be properly ascertained and the clinical causes accurately defined.

SYMPTOMATOLOGY OF ANEMIA.*

FRED ALBERT, M. D., Mason City, Iowa.

The symptoms of any disease should correspond as far as possible with the pathology of that condition. We will, however be led to understand that in anemia there are some symptoms that have no known pathological basis. In one form of anemia, the primary pernicious type, we will hear much of an unknown toxemia as the causative agent. In this disease, the poison, which decimates the erythrocytes, exerts its effects on other tissues simultaneously and the anemia, spinal lesions and fatty changes are co-ordinate manifestations of the same unknown poison.

No great changes have been wrought in recent years in our classification of the principal forms of anemia. Primary pernicious anemia still holds its prominent place as a rather rare and fatal disease of cryptogenic origin. The true cases are supposed to be on the increase. However, more thorough diagnostic methods of the present day will transfer many cases of anemia, formerly classed as pernicious, into the secondary class.

Chlorosis brings to your minds a chain of symptoms that make the picture familiar at the first glance. The disease is disappearing in the United States and in the experience of most of us—well defined cases are the exception. The classical "Green" appearance

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of our patients surely ought to be modified so that it could be more easily detected by the naked eye. In this disease we always note the co-existence of marked pallor, which means a drop in the hemoglobin of the blood, with a plump and apparently well nourished condition of the body.

Secondary anemias form that large class of blood disturbances we meet with from day to day. Occasionally the anemia itself gives us great concern but as a rule we merely note its presence, pass it by to probe the cause back of the anemia and remedy the same.

We are still in the habit of classifying leukemia as a form of anemia. It is a disease characterized principally by enormous hyperplasia of one or more of the leucocytic elements of the blood. The old sub-division into two forms still holds good. They are: a, spleno-myelogenous; b, lymphatic.

Recent study has brought out one fact of interest. The principal changes in both forms occur in the bone marrow. In lymphatic leukemia the marrow is more or less transformed into lymphoid tissue. Leukemias are rare, five times more so than pernicious anemia. The blood changes practically tell the whole story and we shall go no further in a study of their symptoms.

Blood diseases on the whole are of frequent occurrence. No serious sickness can exist for any length of time without leaving its trace on the blood forming organs. The long list of acute infections generate their toxins, which act as hemolytic agents causing both a diminution of hemoglobin and a reduction in the number of red corpuscles. In the ordinary secondary anemias this distinct blood picture is due to hemorrhage or hemolysis—toxins of various kinds destroy the blood elements. The regeneration of cells is only slightly disturbed. When we have a blood picture, the result of both hemolysis and difficult hemogenesis, we commence to approximate pernicious anemia.

The consensus of opinion still places pernicious anemia as a distinct disease entity. But there are good men like Lubbe and Solomon, who declare that pernicious anemia is not a morbid entity but a clinical syndrome resulting from extensive destruction of blood with insufficient repairs. They call it the last stage of symptomatic anemia. It is distinctly true, that many cases formerly classed as primary have been eliminated from the cryptogenic series—the cause having been fully demonstrated.

The ordinary symptoms of secondary anemia are familiar to you all. They must be to a large extent, the symptoms of the disease that caused the anemia. The word "anemia" however always stands for muscular weakness, vertigo, headache, anorexia, dyspnea, palpitation, edema, etc. The blood changes always imply a diminution of hemoglobin from 10 per cent. to 50 per cent. and a reduction

in the number of red cells—one to two million and perhaps the presence of a slight leucoeytosis.

Let us consider now the symptoms of pernicious anemia. The facts I shall present are based on common text book knowledge, on the extensive literature of the subject.

What do we mean by premonitory symptoms? Ordinarily, clinicians do not speak of such a division, for there are really no symptoms that regularly make their appearance before the real onset of the disease. However, in a slowly progressing disease, notoriously insidious, as pernicious anemia, we must to a large extent make our diagnosis on the "tout ensemble" of signs and symptoms, both positive and negative. At first we might have only a few gastric and nervous disturbances with trifling anomalies in the blood. Here a positive diagnosis is almost impossible. We therefore can say that there are a few of the early symptoms we could call premonitory, because they antedate for a longer or shorter time the appearance of the characteristic blood signs. They are:

1. Digestive disturbances. Achylia gastrica is often presented long before the blood picture is seen. It is marked by its intermittancy and resistance to ordinary treatment and usually recurs without any reasonable cause.

2. Nervous symptoms, such as paraesthesias (numbness and tingling sensations) and perhaps peripheral neuritis.

3. Cardio-vascular symptoms, such as palpitation, precordial distress and dyspnoea.

Symptoms are at first few and very indefinite. As the disease progresses symptoms will begin to group themselves and gradually assume a definite diagnostic picture.

Let us now enumerate the ordinary symptoms of pernicious anemia—these will include the early symptoms just mentioned. Gastro-intestinal disturbances are nearly always present and prominent. Nausea and vomiting, diarrhea, occasionally constipation, loss of appetite, sore mouth, epigastric distress, and absence of hydrochloric acid.

Circulatory disturbances are also conspicuous, dyspnoea, palpitation, precordial distress, edema, vertigo, blurred vision, unusual pulsation of arteries, "flapping" carotids, nose bleed and other hemorrhages, and a low blood pressure often as low as 60-80 mm of mercury.

The nervous system comes in with its share of troubles—paraesthesias, as before mentioned, occur early and are present in nearly all cases. We also have neuritis and symptoms resembling tabes and diffuse myelitis.

In addition to these classified symptoms we usually have fever, the classical waxy-yellow color, some loss of flesh, but compared to

severity of symptoms, nutrition is fairly well preserved. We find enlargement of liver, spleen and lymph-glands.

The blood picture of pernicious anemia is as follows:

1. Marked diminution in number of red cells.
2. A moderate decrease in coloring matter—hence a high color index of 1.2 to 2 is usually present.
3. Leucocyte count is usually subnormal.

The stained specimen will show:

1. Marked poikilocytosis made up of microcytes and megalocytes. The average diameter of red cells is increased.
2. A diffuse polychromatophilia.
3. Presence of nucleated red cells—normoblasts and megaloblast which occur in 94 per cent. of cases.
4. Leucocytes show a relative lymphocytosis.
5. Large marrow lymphocytes and Turck's irritation cells.

In our diagnosis we must keep in mind the insidious onset, occurring mostly in elderly people, with long standing and increasing weakness and marked pallor of the skin. But it is on the blood changes that the diagnosis of pernicious anemia is based. From the other symptoms alone it would be usually impossible to tell definitely a severe secondary form from the pernicious type if cause is not considered. But when the blood chart is presented with its record of low red count, high color index, the presence of poikilocytosis, megalocytes, megaloblasts, and leucopenia—the disease is then nearly always recognized beyond a doubt. The presence of megaloblasts is always the confirmation test but it is not indispensable to a positive diagnosis. The presence of megaloblasts also possesses a prognostic value for they appear in large numbers right before death and are often absent for months during periods of remissions.

A few special symptoms may need a little emphasis. The presence of a sore mouth with swollen gums and decaying teeth occurs in one-half of all the cases. A recent case I was permitted to see had in the beginning this symptom in a marked form. Small hemorrhages often occur. Frequent nose bleed, menstrual flow quite marked and prolonged, presence of bleeding hemorrhoids and hemorrhage into the retina, causing disturbed vision. The liver is enlarged in 33 per cent. of all cases, while the spleen is enlarged in 27 per cent. of all cases.

Jaundice is frequently a marked symptom. One case recently seen by the writer with a red count of 800,000, hemaglobin, 40 per cent. leucopenia and a few nucleated reds and an unusually pronounced lemon tinted skin.

Nervous symptoms are of very common occurrence. They are among the earliest symptoms noted and present themselves in many interesting forms. They are at times barely noticeable and then

again they overshadow all others both in early appearance and in severity. The peculiar numbness and tingling sensation is a frequent complaint we hear.

Peripheral neuritis is of common occurrence. It causes intense pain often for long periods of time. We occasionally meet with two special groups of nerve involvement.

a. Spastic type with its spastic gait, increased reflexes and greater or less degree of paralysis, a small number of this group resemble symptoms of diffuse myelitis with complete paralysis of the four extremities and relaxation of the sphincters.

b. The second group show symptoms strongly suggestive of tabes dorsalis. Reflexes are diminished and ataxia is prominent. We may have only "fragments" of a complete tabes picture present, such as ataxia or unsteady gait, with or without Rhomberg's symptom. Others may show lightning pains or girdle sensations.

Sensory symptoms are rare and mental symptoms in pernicious anemia as a rule show no striking physical abnormalities. However, the patient is usually dull and drowsy, growing more and more so as the disease progresses. This is usually due to intoxication. Patients become comatose before death.

Nearly all cases of pernicious anemia are not progressive in their course as the early writers believed, but are characterized by remissions or abatement of symptoms.

However, complete restitution does not take place, so they must be regarded as temporary periods of improvement and not as a cure. The average duration of remissions of improvement is three or four months, although patients have at times remained well for from one to three years. During these periods of improvement the blood findings improve with the clinical signs and many times the blood changes are not far from normal. Even the leucopenia, which seems of certain diagnostic value, disappears for the time being. During these periods of remissions it is often a difficult matter to tell what is wrong with our patients. Then the previous history, with its story so like that which we have just told and a thorough search of a few remaining evidences, will convince us that we are dealing with a pernicious anemia and will make us more guarded in our prognosis.

These same periods of remissions, occurring with quite regularity, form the basis of encouragement that we can give our patients. They feel indeed grateful for these partial recoveries, even if we know they cannot last. Unless we lend them all the encouragement, we will find them slipping out of our hands, grasping at other straws and may learn to our sorrow that some wonderful cure has been accomplished by divine healing, by goat lymph or some other fad—corresponding to a period of remission.

We have two forms of pernicious anemia that lead directly to a

fatal outcome. The aplastic type presents atrophy of erythroblastic tissue instead of hyperplasia. There is no response on the part of the marrow to recuperate, hence the course of the disease is rapidly fatal. It is more a disease of young persons. The general line of symptoms is about the same, but hemorrhages are more frequent, the blood shows a low color index, marked leucopenia and no nucleated cells. Patients usually die in a few months from the beginning of the illness.

The myelophthisic type, a very rare condition, is the result of an overgrowth of some foreign cell element in the bone marrow, crowding out the erythroblastic tissue. Here also a profound and fatal anemia must result.

The differentiation of pernicious anemia from latent carcinoma of the stomach often depends entirely on the blood count. As the cancer develops the diagnosis rapidly clears up.

A comparison of the two blood pictures is all that is necessary. Pernicious anemia shows an extremely low red count—carcinoma only a moderate decrease. Anemia shows a high color index—carcinoma a leucocytosis. Anemia shows megaloblasts—carcinoma shows none.

Grave toxemias of gastro-intestinal tract often produce profound anemias, unlike the pernicious type. The question of cause and effect must here be decided, for men like Herter contend that such toxemia is the most frequent cause of pernicious anemia. Intestinal parasites like the fish tape-worm (*bothriocephalus latus*) often cause profound anemias. A thorough search for their ova and segments should always be made.

The writer has an interesting case which could be called a case of anemia and yet may be a pernicious anemia during a period of remission. The spleen is unusually large, the liver slightly so—caries of the teeth, headache, disturbed digestion, numbness and shooting pains in the limbs are among the symptoms. The blood taken on several occasions has not varied a great deal. Red count about three million—hemaglobin 70 per cent.—whites 6,000—no lymphocytosis or nucleated red cells. This case has been under observation for one and one-half years, with no particular change in her condition.

Our efforts must never relax in a thorough search for the underlying cause of the anemia, for this search may mean the differentiation of the pernicious from marked secondary anemias. It will not only clear up the diagnosis but point the way to proper treatment.

Dr. W. E. Quine—Halls of Fame, it seems, are intended for artists and poets and novelists; for explorers and statesmen and soldiers; but who among you will rise and say that the achievements of the Yellow Fever Commission in Cuba do not represent a greater wealth of service to mankind than has been rendered by all the artists and poets and novelists that ever were born?

THE TREATMENT OF ANEMIA.*

D. N. LOOSE, M. D., Maquoketa, Iowa.

Given a case presenting the symptoms of anemia, our first duty is to make a correct diagnosis. Lazarus, in 'Modern Clinical Medicine,' says:—"My estimate is rather too low than too high, when I say that fully one-half of those who have pale mucous membranes, and cool extremities, and for this reason usually designate themselves 'anemic,' show a perfectly normal amount of hemaglobin. Such persons do not suffer from an abnormal composition of the blood, but from abnormal distribution."

While we accept the textbook nomenclature, primary and secondary anemia, as a matter of fact, all anemias are secondary. Secondary to direct loss of blood, long continued illness, toxemia, caused by toxins manufactured within the body; poisons from without, such as lead, arsenic, phosphorus, or intestinal paratites.

Even in the so called idiopathic type, the anemia is merely a symptom of some disease which has destroyed the blood by hemolysis, or inhibits the hemogenic function.

Treatment, therefore, must be directed first toward the cause. Failing in this, or if the cause is not discoverable, our attention must be directed to the symptoms of the anemia as such.

Medicines play a minor part in the successful treatment of anemia, and yet it is interesting to read the words of that drug pessimist, Osler, when he says, (referring to iron):—"The treatment of chlorosis affords one of the most brilliant instances,—of which we have but three or four,—of the specific action of a remedy."

In simple anemia iron, in some form should be prescribed. As to the form, whether inorganic or organic, opinions differ. Some of the organic iron preparations have merit, are palatable, non astringent and do not injure the teeth. However the prescribing of the much advertised, expensive proprietary preparations of organic iron should be discouraged. In most cases a carefully selected diet, rich in iron, such as red meats, egg-yolks, green vegetables, whole wheat, etc., will give the patient all the organic iron he can assimilate.

In all cases the tincture of the chloride should have first consideration, it being the classic of all the inorganic iron preparations, besides other forms are probably chemically changed by the free hydrochloric acid in the stomach. *Liquor ferri et ammonia acetatis*, Basham's mixture, has also given me very satisfactory results. Ferrous carbonate (Blauds Pill), is a good preparation for long continued administration. A physician recently told me of getting wonderful results from six intramuscular injections of iron.

*Read in Section on Practice of Medicine, Iowa State Medical Society, Sixtieth Session, Des Moines, May, 1911.

the exact formula he used was probably the citrate. In chlorosis, arsenic, preferably in the form of Fowler's solution, or in combination with iron should be given. Some prefer to give the cacodylate of soda by intramuscular injections, one grain dissolved in normal saline daily. Regulation of the bowel function is important, and enemas of normal saline solution daily, either by the drop method or at least under low pressure, and colonic flushings two or three times a week materially hasten convalescence. In chlorosis, added to the anemia, we have a neurosis akin to hysteria. More than thirty years ago, that grand man of medicine and literature, S. Weir Mitchell published his little book, "Fat and Blood, and how to make them." By his method of the application of seclusion, rest massage, electricity and diet, he cured cases who had remained hopeless under routine drug treatment. What we have learned in the treatment of tuberculosis applies largely in the treatment of anemia. Rest, physical and psychical, forced feeding, when possible, and in all cases scientific supervision of the patient's diet and digestion, with proper sanitary environment will accomplish more than drugs.

Direct transfusion is a life saving operation in desperate cases regardless of type or primary cause.

In infantile hemorrhage, 'The results of transfusion are so marked and so immediate that one can say it is just one degree removed from the miraculous, transforming the weak, anemic, dying child into a husky, struggling, rosy, hungry baby.' (Lespinasse and Fisher, Jan., 1911 number Surgery, Gynecology and Obstetrics.) The main objection to the operation is it's difficulty, it requiring two hours to make the anastomosis in one of the cases reported.

The subcutaneous injection of serum, either human or horse, is said to answer the same purpose. Ordinary antitoxin, preferably the unconcentrated form will give the same result. A friend writes me that he has used it in two cases of infantile hemorrhage with complete success. He also quotes Crile as saying,—that in his opinion, either human or horse serum is fully as curative as the direct transfusion of blood. The amount administered must be large enough, injections of 10c, repeated every two hours until 40 to 60cc have been given.

The curative treatment of pernicious anemia is an unsolved problem. Dr. Bierring says: "In Cabot's collection of 1200 cases, there are six recoveries. Cabot, in Modern Clinical Medicine says: 'In the vast majority of cases, including most of those published as 'cures', death follows within three years, but there are a few well authenticated cases still alive at the end of ten years. Perhaps one in one hundred may recover.' Osler says: 'I know of no instance in the male in which recovery lasted five years', farther on, however, he quotes Hale White reporting, 'One case treated by arsenic in 1880 remained well in Jan., 1891.'

The arsenic treatment as given by Osler is:—Begin with three minim doses of Fowler's solution, three times a day, after meals, increasing to five minims at the end of first week. Ten minims at end of second week, and thus increasing doses up to twenty or thirty minims. The remedy, if tolerated must be continued indefinitely. In recent years the arsenic treatment is not so well regarded and most writers consider the disease incurable and fatal. Ehrlich says: "Treatment offers hope of success only in the bothriocephalus anemia."

In view of such a gloomy prognosis, I ask your tolerance in presenting a plan of treatment, which according to Dr. Alfred C. Croftan of Chicago, has produced striking results. I quote largely from his article published in the Journal A. M. A., August 13th, 1910. Disturbances of the gastric function, varying from a mild degree of dyspepsia, to complete achylia gastrica, almost invariably precede, and accompany pernicious anemia throughout. He reasons, as others have, that the causal factors may be perverted digestive secretion resulting in chronic undernutrition or gastrointestinal auto-intoxication and, later, hemolysis. The treatment consists, in the incorporation of the maximum amount of proteids administered with artificial digestants to facilitate assimilation. The diet is an abundance of meat, eggs, milk, buttermilk, all in a finely divided form, and fed incomparatively small quantities at frequent intervals. Instead of three large meals, five or six smaller feedings in twenty-four hours. Meats are given broiled, roasted or stewed, never fried; or as meat juices, raw or slightly heated, meat jellies, peptones gelatins. Eggs preferably raw or soft boiled, in large quantities a dozen a day if possible. Milk and milk preparations ad libitum. Fats sparingly, because they are apt to coat the albuminous particles in the stomach and thus prevent contact with artificial digestive juices to be administered. Enough cereals, breadstuffs and vegetables and fruits, all in a soft, finely divided form, are allowed to make up a palatable meal. Such an "over-diet", in which albuminous foods predominate, is given both by mouth and rectum; per rectum in the form of predigested clysmata, with sodium-bicarbonate, sodium chloride, pancreatin and 10 drops of laudanum, once or twice daily.

The distinctive feature, however, of this treatment is what he calls, "the acid plan." 10 or 15 drops of strong hydrochloric acid are given, in mucilage water, fifteen minutes after each feeding, and again thirty minutes after each feeding. It is useless to give the dilute acid. In addition thyroid extract in three to five grain doses, three times daily, is given on the theory that it aids in the assimilation of proteids. In the beginning, one grain sodium cacodylate was given intramuscularly. Improvement rarely shows before the tenth day, and three weeks hospital treatment is generally

sufficient, after which the patient is educated to continue the treatment in his home. The acid must be continued indefinitely, during years, or at least as long as the gastric secretion is deficient.

A brief synopsis of the three cases reported by Croftan is as follows:—Mr. K. M. M., age 54, entered Michael Reese Hospital, Nov. 2nd, 1908, weight 132 1-2 lbs., History of gastro-intestinal disturbances extending over several years. Rapid loss of flesh during last year. Pale, anemic, slightly edematous skin. Gastric analysis shows complete achylia gastrica without motor insufficiency. Blood examination:—hemaglobin 30 per cent, red blood cells, 1,180,000, white cells, 7400. Red cell morphology:—poikilocytosis, megalocytes, microcytes, megaloblasts, microblasts, a few nucleated reds and polychromatic degenerations. After three weeks treatment; weight 137 1-2 lbs., no edema, color, strength and spirits greatly improved. Blood examination:—hemaglobin 65 per cent, reds 2,600,000. No megaloblasts or microblasts, a few nucleated reds, poikilocytosis still present but less marked. Treatment continued at home with steady improvement and resumption of daily duties. Blood examination at the end of ten weeks:—hemaglobin, 85 per cent, reds, 4,400,000, whites, 8,400, no abnormal red cells. Feb. 9th, 1910 reports:—"I am as good as ever." Weight in May, 1910, 147 1-2 lbs.

I wrote to the three patients whose cases are here, reported, asking:

1. Are you well, and have you been well all the time since leaving Dr. Croftan?
2. Are you still taking the acid?
3. Are you taking any other medicine?
4. What, in your opinion caused the anemia?

Under date, April 20th, 1911, Mr. K. M. M. replies:—

1. I am well and have been well all the time since leaving Dr. Croftan.
2. I am still taking 13 to 15 drops of acid after each meal.
3. I take one Blaud's pill every night.
4. Worrying over my business brought on nervous indigestion, and then the anemic condition was the result.

Case, 2. Mrs. K. L. C., age 49, entered Michael Reese Hospital September 14th, 1909, weight 119 lbs. History, increasing weakness, severe digestive disorders and great loss of weight within a year. In a state of profound prostration, unable to be out of bed. Exceedingly pale and slightly edematous skin. Gastric analysis shows complete absence of hydrochloric acid, no motor insufficiency. Blood examination:—hemaglobin 30 per cent, reds 1,384,000, white cells 6800. Red cell morphology:—poikilocytosis, many megalocytes, and microcytes, a few megaloblasts and polychromatic degeneration types. After four weeks treatment, weight 133 1-2 lbs., skin florid,

no edema and strength almost normal. Blood examination:—hemaglobin 60 per cent, reds 3,400,000, white cells 9100. No abnormal red cells excepting slight poikilocytosis. October 26th, 1909, hemaglobin, 85 per cent, reds 3,500,000, weight 146 lbs. December 27th, 1909, hemaglobin 100 per cent, reds 4,400,000, no abnormal morphology. In May, 1910 patient reports, "I feel splendid, sleep well and have a good appetite." This patient writes under date April 23rd, 1911:— "After I left Dr. Croftan I improved for six months, and would, I think, have continued to, but had a great sorrow. I can't sleep and my appetite is very poor. I still take the acid, 30 drops after each meal. I take no other medicine. I think the disease was caused by change of life. The treatment Dr. Croftan gave me, saved my life and is just the thing for anemia.

Case 3. Mr. J. A. B., age 46, entered Michael Reese Hospital Sept. 1st, 1909. Weight 133 lbs. History, loss of strength and rapid loss of weight, for seventeen months. Exceedingly weak, very pale, and slightly edematous. Severe gastric distress with loss of appetite and nausea. Gastric analysis, absence of free hydrochloric acid and slight degree of motor insufficiency. Blood examination:—hemaglobin 40 per cent, reds 1,800,000, white cells 8200, severe poikilocytosis, megaloblasts, microblasts, megal- and microcytes, nucleated reds and polychromatophilia. Discharged from the hospital, Oct. 2nd, 1909, weight 155 1-2 lbs. Blood examination:—hemaglobin 75 per cent, reds, 2,400,000. Poikilocytosis slight and no other abnormal red cells. Treatment continued at home with progressive gain in weight and strength and resumption of farming duties. Patient reported on May 12th, 1910, weighing 157 lbs., and with an altogether normal blood picture. In answer to my letter, this man writes under date of April 24th, 1911:—"So far as anemia is concerned, I am well and have been since leaving Dr. Croftan. From the spring of 1910, until about Dec. 1st, 1910, I never felt better in my life, of course my nerves were weak from that, and we had much sickness in the family until I got down again, but not from anemia, but my nerves. I am doctoring with Dr. Croftan now for that. I am still taking the acid, two doses after each meal, 15 drops to a dose in about 5 or 6 ounces of water. I am also taking a tablet three times a day containing thyroid extract. I consider it almost a miracle that I am alive today." Remissions are part of the clinical picture in pernicious anemia. Dr. Bierring says:—"The average duration of remissions is three months, although instances are recorded where patients have remained comparatively well as long as three years. While sufficient time has not passed, in the cases quoted, to warrant claiming absolute cures, the first case claiming two and one half years perfect health, the other somewhat less, yet I believe this treatment offers more encouragement than any other advocated thus far. Under date of April 17th, 1911, Dr.

Croftan writes:—Since the paper, I have had a number of cases of the true idiopathic variety, associated with achylia gastrica. 60 per cent. improved, as the first three, promptly. 40 per cent. did not improve, or did not remain better. In all these 40 per cent there were special cord changes, and it was probably too late. I have, besides, four cases reported to me by other doctors out of town, who promptly recovered and are still well.

DISCUSSION OF PAPERS OF DRS. HOWARD, ALBERT AND LOOSE.

A. R. Robertson, Des Moines: Just what may produce this toxic substance is entirely dark—whether it is the action of some particular form of bacteria or of a product of tissue destruction; for we certainly find tissue destruction in the gastro-intestinal mucous membrane. We do know that pernicious anemia is a thing of toxic origin; everything points to the fact of it being a distinct toxemia. The toxin acting upon the body of two types, by reason of the histological changes which we find. It is certainly a hemolytic poison, and to a certain extent a psychotoxic poison. We find, this, when we come to examine certain tissues of the body. It has been a favorite theory, that the toxic substance is elaborated in the gastro-intestinal tract. This, I think, is pointed out very strongly by the fact that we find necroses in the central zones of the liver. It would seem that these necroses are due to the action of toxin in the blood acting directly upon the liver cells at the point where the circulation of the blood in the liver would be most sluggish, that is, toward the center of the lobule, a definite toxic action, of course, in certain parts of the body, particularly the heart, and of course the nervous system. As to the actual origin of this toxin, of course we are entirely in the dark, but it is a very interesting observation to note that there is a toxic substance in some way combined with the lipoid in the mucous membrane of the gastro-intestinal tract, which has a potency of ten times that of other lipoids, which can be isolated from the normal mucous membrane. Certainly we have to regard this is one possible etiological factor; there may be others which will be brought out by some future research. On the other hand, chlorosis is a condition which does not present a picture of toxic origin. It seems in some mysterious way to be bound with physiological activity at the establishment of puberty and the establishment of the menses in females.

W. H. Rendleman, Davenport: In the symptomatology of the anemias there are no characteristics which definitely distinguish one from another. In the first place, we must determine if an anemia actually exists; this, as a rule, is easy; in the second place, what kind of an anemia we are dealing with. This can only be determined by a careful blood examination. In the great majority of cases the anemias that we see are secondary; in a small proportion of cases we have the so-called primary anemia—either chlorosis or pernicious anemia; and it is important to know which we are dealing with. If we are dealing with a secondary anemia, of course the next thing is to find out what the actual cause of this is. In pernicious anemia there are two peculiarities which I may mention. The first is the contrast between the symptoms presented by the patient and the actual blood findings. Usually a patient will have less than 2,000,000 reds before he seeks medical advice; it may be even as low as 1,000,000. He may feel tolerably well; he may have a fair amount of strength and be doing his work, and yet have a red blood count of less than 2,000,000. And their peculiarity is that mentioned by Dr. Albert, and is the remissions. These are of common occurrence. Pernicious anemia is not progressive at all times; remissions occur in which the blood examination may be almost normal and the patient's symptoms almost normal. If a patient presents himself at this time, the condition may be overlooked. In the chlorotic type of anemia, or an anemia of any type occurring in girls from fifteen to twenty years of age, we are very likely to call it chlorosis, and this I would warn against. At this age incipient tuberculosis is very frequent, and it is easily overlooked. Other forms of

secondary anemia have to be considered at this time, caused by bright's disease, lead poisoning, arsenic, perhaps syphilis or malaria, or persistent hemorrhages from the uterus or hemorrhoids, and these should not be overlooked. One test of chlorosis is a therapeutic test. In chlorosis the giving of iron should relieve the symptoms very markedly within three or four weeks. This, I should think, would point to chlorosis having a morbid entity of its own, rather than being a secondary anemia. Anemias may be easily overlooked if not thought of. Many a time a patient is treated for biliousness or something of that kind, or presents symptoms of dizziness, dyspepsia or lassitude, and may be treated for a long time before the physician thinks of anemia. After he once thinks of it the diagnosis is easy.

J. E. Conn, Ida Grove: The treatment of pernicious anemia is almost out of the question when you think of the mortality being greater than in any disease you know of. It is greater than cancer, six out of 1200 cases getting well. In the ordinary chlorosis case it is a different matter, and if you put the patient to bed and feed them iron and nutritious food, they will all get well. These people ought all to be under the care of a nurse, because in the first place, they are very irritable and will not carry out directions given to them by their physicians; therefore you should either insist on their being in a hospital, where they will have the proper care, or else under the direction of a trained nurse.

I am glad Dr. Croftan has obtained some good results with his hydrochloric acid treatment. However, that is a new thing, and whether the old symptoms will return with these people is a question. There is no question but what all of us who have treated pernicious anemia have thought at times we were curing our cases, because they had a remission and were getting better, but suddenly would fail again and die from the disease. We will all watch with interest Dr. Croftan's results from his hydrochloric acid treatment. It is certainly a heroic treatment when you think of giving 10 or 15 drops of pure hydrochloric acid fifteen minutes after eating.

W. L. Bierring, Des Moines: In this interesting discussion on the subject of anemia there are a few points that should be emphasized. First, in the etiology of this rather obscure condition there is only one definite cause by which the pernicious type of anemia has been experimentally produced, and that is through the medium of the fish tapeworm. All the others are clearly secondary, and expressions of a disturbance in the blood-making structures, principally the bone marrow; in most cases it is apparently a toxemia of indefinite nature, frequently attributed to enteric origin. Recognizing then, anemias as simple expressions of a systemic toxemia, it seems unnecessary to differentiate between primary and secondary forms, because essentially they are all secondary. In one instance, perhaps, the primary cause is more clearly demonstrated; in some it is obscure and indefinite, but it is always a secondary manifestation. It is evident, also that the change that takes place in the hematoc cells, as well as the lesions that occur in the spinal cord and other structures are all a part of this same toxemia, and these changes are an essential part of the pathology of the condition, and the principal factors in the symptomatology. Pernicious anemia does not always manifest special symptoms of disturbances in the nervous system, but occasionally the nervous phenomena usher, in the disease and cases presenting numbness of the extremities, paresthesias or other perverted sensations will often upon careful examination disclose a condition of pernicious anemia. Reference has been made in the discussion to the curability of pernicious anemia, yet from observations made in a large series of cases, I am fully convinced that a true case of pernicious anemia does not get well; that the few instances of so-called recoveries, are entirely cases of remissions. In some instances these remissions have been known to persist through a period of years, but in no case has a remission been a real restitution to the normal state. The leucocyte formula and general blood count may greatly approximate the normal, the color, weight, and strength of the patient be greatly restored but the achlorohydrria usually persists, and I have never felt satisfied that the blood picture quite came back to the normal state. There is no more difficult diagnosis to make than that of pernicious anemia during this remission state.

I do not believe that we have today any specific for pernicious anemia. For the secondary anemias, so-called, where the primary cause is evident the treatment is clearly indicated, and a recovery frequently takes place, but for the condition of pernicious anemia we are confined in our treatment to such measures as tend to cleanse the intestinal tract, to restore the acidity of the gastric contents, restrict the intake of highly nitrogenous food, and carry out all such measures as tend to promote the general health of the patient; arsenic tends to stimulate the bone marrow, and possibly also makes the newly formed red cells less valuable to toxic or hemolytic influences; again iron may be helpful in restoring the deficient hemoglobin, but none of these remedies have any specific influence upon the disease.

James B. Herrick, Chicago: I have been greatly interested in listening to these three excellent papers and the as excellent discussion upon them. I would indorse what Dr. Bierring has just said with regard to the difficulty of diagnosing pernicious anemia in the period of improvement.

While one hesitates to question the statements of reliable men, that they have seen patients recover, one still feels inclined to agree with what Dr. Bierring has just said: that the instances of recovery are merely instances of long periods of improvement. There is nothing, perhaps, that is more characteristic of pernicious anemia than these remissions, followed often times by periods of improvement. Two, three, half a dozen may occur; and it is remarkable how long the period of improvement may be, extending in one case that I have personally seen over a period of seven years, the patient in the meantime being able to do active work. Dr. McPhedran of Toronto, within the last two years, reported a case where the period intervening between the first attack and the second and fatal attack was, I believe, ten years. It is extremely difficult to take hold of a patient during this period of improvement, and, either by the subjective history or a physical examination of the blood, tell definitely that he still has pernicious anemia; yet I believe that the blood picture will as a rule show something abnormal.

The tendency in the earlier days, when Ehrlich first made his statement regarding the staining of the blood, was to emphasize the importance of nucleated red corpuscles in the diagnosis of pernicious anemia, and without the finding of megaloblasts one hesitated to declare that the disease existed. I think Hunter is altogether unjust in his condemnation of Ehrlich.

And yet there is a great deal of truth in what Hunter says about the folly of wasting two or three hours in hunting through many a slide in the hope of finding a single cell of large size which we may call a megaloblast. We are certainly able to diagnose anemia in many cases without the presence of these megaloblasts.

The presence of jaundice has been referred to, and this in the past history is often rather suggestive of pernicious anemia. We frequently get the history that the patient was weak, perhaps had gastro-intestinal disturbances, was somewhat pale and was jaundiced. Possibly, he was treated for liver disease, and this yellow color is sometimes so striking as easily to mislead one into thinking of gall-bladder or hepatic trouble. I have known one patient who came a distance of five hundred miles to see a surgeon to be operated on for gall-bladder trouble, when he had a case of straight pernicious anemia; and I had a surgeon send a patient to me to have his diagnosis of gall-bladder trouble confirmed, preparatory to operation, the case being one of pernicious anemia.

One other little point, with regard to the color index. It sometimes hovers very close to 1, and we must not, I think, too quickly exclude the so-called pernicious anemia because the color index has gone possibly a shade below that.

In the treatment the use of arsenic is quite general. I for one still use it, though I certainly do not look upon it as a specific. I also use in a large proportion of the cases hydrochloric acid, and in goodly amounts. It is a rather striking commentary on the insufficiency of our treatment of pernicious anemia, that we have a treatment in which the highly nitrogenous protein diet is recommended, and yet from others, as, for instance, from Grawitz a plan of treatment, according to which the use of nitrogenous food is interdicted. Grawitz cuts out the meat, milk, eggs and broth, and gives carbohydrates and fats. He also gives arsenic and

hydrochloric acid, and is particular to secure free elimination through the bowels. His method of treatment I have tried in several instances—oftentimes with failure, sometimes with most excellent results. It is frequently important to have our patients under careful hospital management, where rest, diet, freedom from worry, can be secured.

Just one other point with regard to the use of arsenic. Once I saw the paresthesia, pains, etc., that were thought to indicate spinal cord lesions disappear as 30 drops of arsenic three times a day stopped. That, I am sure, was a case of arsenical neuritis. One has to be a little careful about giving arsenic in too large doses.

T. B. Throckmorton, Cherokee: I believe Dr. Loose referred to the S. Weir Mitchell rest cure. I wish to say that it was my privilege to study under Dr. Mitchell in Philadelphia a case of pernicious anemia. The patient was admitted with a tentative diagnosis of epilepsy. The pallor of the skin indicated that there must be some blood dyscrasia. A blood examination was made, the results of which showed the characteristics of pernicious anemia. After several weeks on the so-called rest treatment, with daily massage, the patient complained of feeling more weak and tired after a treatment than he did before. Dr. Mitchell requested that a blood examination be made immediately before and following treatment. The results were that while the hemoglobin was low, 20 per cent, and showed little change one way or the other (it could not be obtained with accuracy by the hemoglobinometer), nevertheless there was a distinct drop in the erythrocyte count following the massage. The treatment was immediately discontinued, but the patient died in a short time. The blood findings were those of a typical case of pernicious anemia.

DIVERTICULITIS.*

L. W. LITTIG, M. D., M. R. C. S., Davenport, Iowa.

Sometime ago, in the hearing of a well known practitioner, I mentioned the word diverticulitis, asking what it meant. He answered "Why, inflammation of Meckel's diverticulum, of course." I protested feebly, but without avail. He might just as well have said inflammation of the appendix vermiformis, so far as conveying an up-to-date meaning of the word is concerned.

During the past year a well known American surgeon, traveling in England, consulted a great London surgeon for some bowel difficulty. The verdict was carcinoma, and inoperable. The reply, "I did not ask you whether it was operable or not, I simply asked you for a diagnosis." This well known American surgeon immediately returned to America, was operated by W. J. Mayo, and the correct diagnosis, "Diverticulitis," was made. Another well known surgeon living in Philadelphia, went to Rochester for an operation for cancer of the bowel. The operation was a complete success, as was the former, and the diagnosis was "Diverticulitis." Some years ago, an Iowa surgeon operated for appendicitis, but found what he considered cancer of the head of the caecum. Owing to the timidity of the attendant, the removal of the growth was not attempted, but the abdomen was closed, and the family piously told to expect the worst. However, they had heard of the

*Read before the Washington County Medical Society, April 20, 1911.

x-ray, and under x-ray treatment the patient made a complete recovery. This was a case of "Diverticulitis."

Within the past six months a Chicago surgeon opened the abdomen in the right lower quadrant, and found an inoperable tumor of the caecum, made an anastomosis of the ilium with the colon above the tumor, but instead of the expected fatal result the patient made a nice recovery. It was a case of "Diverticulitis." A short time since, another Chicago surgeon had a patient who passed fecal matter with her urine. On operation, a connection was found between the sigmoid and the bladder; Diverticulitis, the diverticulum having become adherent to and perforated into the bladder.

On Wednesday of last week, I attended the clinic of a prominent surgeon in Chicago. He said, "we have a very interesting case, two years ago we made a diagnosis of cancer of the sigmoid, but the history since then proves that the diagnosis was not correct. We now made a diagnosis of Diverticulitis." On examination, the sigmoid appeared to be normal.

This case illustrates the fact that diverticulitis of the sigmoid presents the clinical picture of cancer of the same viscus.

Another patient presented symptoms of acute appendicitis, pain, tenderness, and the possible diagnosis of abscess, but on the left side. Diagnosis, appendicitis. On operation the appendix was found to be normal; diverticulitis of the sigmoid. A patient had periodic attacks of pain on the left side, possible tumor, considerable local tenderness, free evacuation of the bowels, recovery, Diverticulitis.

Diverticulitis may be congenital or acquired. Meckel's diverticulum is a type of the congenital, also the appendix. Congenital diverticula, have all the coats of the bowel, namely: the mucus, the sub-mucus, the muscular, and the serous. In acquired diverticula, as a rule, the muscular coat is wanting, although present in some cases. The term diverticulitis, in a modern sense, is applied only to inflammation of acquired diverticula. More strictly speaking, it means inflammation of the mucous membrane lining these diverticula, whereas, peridiverticulitis is applied to inflammation of the structures immediately about the diverticula.

Acquired diverticula are found in the entire intestinal tract. In the small intestines they are usually along the mesenteric attachment, because the bowel is weaker at this point. In the large intestine, there is no part especially disposed, diverticula being found just as often opposite the mesenteric attachment as on the side to which the mesentery is attached. The sigmoid and rectum are most often involved, and from a diagnostic and clinical standpoint, it may be said that the sigmoid and rectum only are envolved. This

must be remembered when the symptoms are those of a recurrent appendicitis, with pain on the left side, or when cancer of the rectum or sigmoid is suspected. Diverticula of the small intestine rarely produce symptoms, and for our purpose are not to be considered. Diverticula of the sigmoid interest us most. Diverticula of the rectum are relatively rare.

Turning to Osler's *Modern Medicine*, I noticed that acquired diverticula, in which all of the coats of the intestine are involved, are extremely rare, and when all of the coats are involved the diverticulum is due to the pulling of adhesions, the result of some extra intestinal inflammatory condition. Alfred Stengel, in Osler's *Modern Medicine*, says "it does appear possible to have a true acquired diverticulum, which is not a result of traction." It must be remembered that true diverticula, in this conception, have all the coats of the intestine, mucosa, sub-mucosa, muscularis and serosa. Such appears to be the first cases reported by Mayo and Griffin. In false or acquired diverticula, the mucosa projects through the muscularis, reaching to and sometimes pouching the serosa.

Adami, in his *Principles of Pathology*, 1909, tells us that acquired diverticula in the intestines are not uncommon. They differ from the true diverticula, of which Meckel's is a type, in that they are often multiple, are situated between the layers of the mesentery, or near the mesenteric attachment, and are usually made up of one or two coats of the bowel, the muscular layer being often wanting. In many cases, the condition is a hernia of the mucosa into the serosa, or again the serosa may be the only covering. Most cases are associated with chronic lung affections in old people. The strain of coughing is apparently the exciting cause, the bowel giving way at its weakest point, mainly where the mesenteric veins leave it at the mesenteric attachment. Diverticula are prone to occur after middle life, when there seems to be a physiological tendency to weakening at this point.

Hanseman has recorded some cases, in which there were about 400 diverticula, varying in size from a hemp seed to a pigeon egg. Adami does not mention diverticulitis. McFarland in his work on *Pathology*, 1904, devotes seven lines to diverticula of the intestine exclusive of Meckel's diverticulum. He says, "Partial dilatation, in the form of incomplete diverticula or pouches are not frequently formed. The most interesting diverticula that I have seen occurred low down in the sigmoid flexure, and consisted of a double series, one on each side of the longitudinal muscular bands. Each was about a centimeter in diameter, communicated with the bowel by a small opening, and contained a small, rounded mass of inspissated fecal matter."

Stengle, speaking in Osler's *Modern Medicine*, tells us that long continued constipation is the chief cause of diverticula and

also of diverticulitis. Mayo and Wilson, in the Transactions of the American Surgical Association, 1907, tell us that small particles of hardened fecal matter often find their way into these diverticula, producing a diverticulitis or a peridiverticulitis.

The symptoms may be briefly described as those of appendicitis on the left side. The patients are usually males over 45 years of age, otherwise in robust health and generally inclining to obesity. The direct attack may be preceded by a left sided pain low in the abdomen, coming on in spells and associated with constipation, sudden, more acute pain, general at first, later localized in the lower iliac fossa, and more or less paroxysmal in type, marks the onset of definite symptoms. Vomiting is usually not marked unless the pain is very severe. There is more or less rigidity of the left rectus muscle. The previous constipation may now change to diarrhoea. Finally a mass is discovered developing to the left of the medium line in the middle or lower quadrant of the abdomen. In women this mass is at times pelvic rather than abdominal, due probably to the fact that the female pelvis is roomier and the sigmoid more movable. The general symptoms of infection depend upon the severity and extent of the inflammatory process.

In the obstructive cases the inflammatory symptoms are much less marked and the general symptoms of slowly progressive obstruction predominate. The condition may be readily confounded with carcinoma, especially as both conditions occur in advanced life; the formation of the tumor is, however, more rapid in the former. In diverticular obstruction there is usually a noticeable disharmony between the rather considerable size of the tumor and the lack of cachexia. Furthermore, the presence of blood in the stools would point strongly in favor of carcinoma."

Turning to Keen's Surgery, we find the following: Acquired diverticula are found in the small intestine, appendix, colon, and especially the sigmoid flexure and the rectum. In number they are from a few to several hundred. In the small intestine they are generally found near the mesenteric attachment. In the large intestine there is no site of predilection. In size they are from a pea to chestnut, or they may be only microscopic in size. They are due to constipation, or some underlying cause favoring both constipation and diverticula. Three serious conditions may result from diverticula.

1. Fecal matter may find its way into them producing pain and a peridiverticulitis, the symptoms being not unlike those of chronic recurrent appendicitis.

2. Intestinal perforation may occur, resulting in a local abscess or general peritonitis, the abscess may rupture into the bowel or be evacuated by the surgeon.

3. Adhesions to a neighboring viscus, as the bladder, may

occur with perforation into the bladder. Or a peridiverticulitis may produce a marked connective tissue growth, resulting in the thickening of the intestinal walls and intestinal obstruction. Here especially the diagnosis of cancer of the intestine is not apt to be made.

The majority of patients are over 50 years of age and give a history of constipation. Symptoms: pain on the left side, a hard, tender and irregular mass, the patients are often anemic, and sometimes under weight. Or, there may be irregular pain, similar to chronic appendicitis. The treatment is suggested by the condition.

Beer, in his article in the Journal of the American Medical Sciences, has written what appears to be to me the best paper on the subject. All others have studied and taken from this article. He classifies diverticula as true and false; true diverticula having all the coats of the intestine, in false diverticula one or more of the coats being wanting. In the small intestine they are rather regular along the mesentery, layers of which they often separate. They are rarely larger than a walnut and vary in size from a pea to a chestnut. They usually occur in old people who have long suffered from constipation. Klebs finds them in fat people. Hanseman emphasizes the leanness of his subjects. They are clearly related to the vessels of the mesentery, the intestinal wall being weaker and more prone to give way at the point of exit of the mesenteric veins. Beer is very much at a loss to account for their presence, but states that they occur in worn out bowels with a weakened muscularis. He doubts the etiological importance of constipation and diverticulitis are both due to the weakened condition of the bowel. Fecal matter lodged in the diverticula produce a peridiverticulitis. Beer reports eighteen cases examined by himself, and in most of these all the diverticula were filled with fecal matter, and in some cases there was ulceration of the mucosa.

We readily understand why cases of diverticulitis or more accurately peridiverticulitis has been mistaken for cancer. The bowel walls have become thickened, irregular, and stenosis has resulted. Cases of this kind are reported by Beer. Beer also reports cases of left side abscess, suggesting appendicitis. Adhesion of a diverticulum to the urinary bladder with perforation sometimes permits an escape of the bowel contents into the bladder.

Twenty years ago, Virchow stated that diverticula were occasionally found, and that cancer might develop from them. Beer says further that the possibility of this is proven by one case reported by Hochenegg.

More recently the Mayos have written on diverticulitis. Their first case was not diagnosed. There was suspected a cancer of the cecum. There was one case in which there was a rupture into

the bladder. Another case simulating appendicitis with abscess. Others in which the attacks were similar to those of chronic recurrent appendicitis. Others have had severe pain on the left side, with constipation, relief following evacuation of the bowels. Wilson believes that there is a congenital weakness of bowel wall which accounts for their occurrence.

A clinical diagnosis, Griffin, of Rochester, tells us, can not be made positively. If there be low left side pain coming on in spells, diverticulitis would be suggested. If the pain be more acute and general at first, and later localized in the left iliac fossa diverticulitis would be likely. A sudden appearance of a mass in the same region would make the diagnosis very plausible. Cancer would not appear as promptly.

Diverticulitis of the sigmoid and the rectum interest us most, and they may be regarded as a dipping down of the mucosa through the muscularis to the serosa, and so small that they are only found thinning the muscularis and pouching both the muscularis and the serosa.

To resume; 1. The symptoms of diverticulitis are those of chronic recurrent appendicitis on the left side of a patient past the meridian of life.

2. The symptoms may be those of an acute attack of appendicitis, except that the pain and muscle defense is on the left side, with abscess, or general peritonitis.

3. The diverticulum may become adherent to and perforate into a neighboring viscus, as the bladder.

4. The symptoms and diagnosis may be those of cancer of the sigmoid or rectum.

5. The symptoms may be those of intestinal obstruction.

Diverticulitis favors the occurrence of cancer, and a most careful examination may sometimes be necessary before the presence of cancer can be positively eliminated. The treatment depends upon the surgical condition, be it an abscess, or adhesion to and perforation into a neighboring viscus, or intestinal obstruction.

Maurice H. Richardson, M. D.—The diagnosis of breast tumors on which the surgeon plans his operation may be so positive that he can safely extirpate the tumor by the broadest margin, and carry the axillary dissection to its farthest limitations. But can he always be thus positive? May he not unnecessarily remove the breast, and subject the patient to an unjustifiable danger through an error in diagnosis? May not certain cases of benign tumor resemble so closely cancer that the surgeon is mistaken?

One varies, perhaps, in the positiveness of one's opinion. One's diagnosis may be an absolute conviction. I have often said—and I here repeat—that the diagnosis of cancer by gross appearances, plus the history, made by an experienced surgeon, is more worthy of credence in some cases than the microscopic examination alone. But it is certainly true that before operation the most experienced may be mistaken.

GROWTH OF PUBLIC INTEREST IN SANITARY SCIENCE.*

C. W. BAKER, M. D., Stanwood, Iowa.

When chosen to accept the chair of this society, I was possessed by a feeling that another might administer to its needs better than I. I am deeply grateful for the honor you have bestowed, and for the efficient assistance rendered by the committees, as well also, the response to request for program material by the members. Our secretary and new program committee, have given much valuable time to insure success at this meeting, and are especially worthy the gratitude of the society. The association, I feel has been mutually profitable to us, in kindly sympathy and respect resulting.

My words today, briefly, will be along the line of new thought, which is taking possession of the medical, as well as lay mind, the growth of sanitary science and public education. From a meager beginning, in the early centuries of Egyptian life, medicine has grown to become, as time goes on, a worthy and dignified profession, possessing the pride and hauteur of a staid fixture in the world's growth. Much of its attention has been occupied in deep study and profound meditation, most of which has wrought much for the good of civilized nations.

In every age since its birth there have been valuable discoveries made, and a great store of knowledge gathered which must serve for the world's betterment. To suppose that medicine has occupied herself with the task of formulating knowledge to be confined between the straight walls of scientific doctrine, would be a mistake. She has, in the past through many of her votaries, taken excursions into the bypaths of public need, and brought knowledge to the attention of the profession, which seems very like modern ideas and practicability; considering the urgent need for such measures for public safety in the past we wonder that such measures were not earlier enforced. For instance, Meade, in the middle of the eighteenth century, proposed to the English public the adoption of common measures for public safety. Nevertheless such measures were not enforced until 1831 under pressure of repeated scourges of cholera. Eugene Ware, the poet, says, "Human hopes and human creeds, have their root in human needs." Another has said that panic is the parent of sanitation. As a result of the wakening of public sentiment to its own needs, in 1847 Liverpool and London appointed the first Health officers in Great Britain. In 1848 still another epidemic of cholera broke out and a general Board of Health was established. At the present day England boasts the most complete and precise measures for public health of any country on the globe. Parliament being at the head directing

*President's Address, Iowa Union Medical Society, Cedar Rapids, July 12, 1911.

all health legislation, makes the Nation, instead of any part of it, the principal mover in all measures pertaining to the health of her people. The Public Health Act of 1875 established a Board consisting of a President, nominated by the Queen, and the members of the board are the Lord President of the Privy counsel, all the principal Secretaries of State for the time being, the Lord Privy Seal, the Chancellor of the Exchequer, a parliamentary Secretary, and a permanent Secretary. Departments governed by the Board, are—Poor law administration; Legal questions; Sanitation of public buildings; Sanitation Streets, Sewers, etc.; Medical Hygiene; Vaccination; Hygiene of factories; Water supply and Statistics. This was followed by similar enactments by other countries as time went on. Our government has no national laws of uniform character. Each state being the originator of such health measure as its legislators deem most fitting to either the public, or that which will subserve to best purpose their individual whims, which latter usually grows out of personal self seeking. As a baneful sample of this we as citizens of Iowa do not have to go far to make the discovery,—Shameful incompetence and personal vindictiveness sways the penny-wise legislators of this great commonwealth today in matters of public health. This backward step on the part of Iowa does not necessarily augur for ill, however, further than to embarrass the acts of those who are giving whole hearted devotion to the cause of the public. Clean and efficient laws must ever eventually succeed. We cannot extract comfort however, from this spirit in our hopes for an early formation of a National Board to direct public measures, from a department at Washington. Sooner or later this must come to pass with us. Permanent uniform measures for general good cannot be enacted in a spirit of divided interest, as at present. As it is, the general government is simply a compiler of statistics, and secondary in influence, to legislation necessarily weaker in general usefulness and less far-reaching in its protection.

The government passed an act, March 3, 1879, to prevent the introduction of contagious diseases into the United States. All admit this to be a step in the right direction, and a most important beginning. This Act provides for a Board of seven members from the Army and Navy Medical departments, combined with the Marine Hospital corps, and the Department of Justice. No definite term of office is prescribed, the tenure being provisional only, which has been of signal use in protection afforded at our seaports.

Dr. J. B. Murphy in his recent presidential address fully covers the present situation of Public Education, and needs. So clear and wholesome is its contents in point of simple wisdom conveyed to us as well wishers of all that is good in medicine, that I cannot deny myself the opportunity to bring before you that

part which is apropos of my subject, and I will let his words represent mine in part; much of it bears reiteration unto the day of success. When the profession using all its wisdom shall bring itself to the adoption of this particular brand, I am sure of a most positive impetus for good. After commending the work of "Council on Health and Public Instruction," he says, "It is my belief that public instruction in medicine is one of the most important functions which the American Medical Association has to perform. The first and all pervading idea of our medical heritage is the public—the people—concretely the patient. For centuries the medical profession have criticised the public for its lack of judgment in its selection of doctors. It has employed the quack, the irregular or sectarian, the psychopathic, and Christian Science healer, the bone-setter, and the Chiropractic; these were not employed alone by the ignorant, the foreigner and the poor, but also by those known as the intelligent, reasoning, educated, wealthy people of every community. They place a greater amount of confidence in all these healers, and more enthusiastically support them, than they do the regular members of the medical profession. Why? Are they more skillful? Are they more worthy of confidence and support? Not at all. But they give the patient some kind of explanation, reason, or working hypothesis for the results they attempt to obtain, or claim they secure. In other words, they educate the people in their theories, beliefs, or sophistries, and that is what the public wants in fact, what it demands. What has the regular medical profession done to educate the public in the last three centuries? Nothing! We have demanded of the public our acceptance in blind faith, and the age of blind faith in individuals is past. What have we taught them of the real truth or principles of scientific medicine? Nothing! What beacon have we set for the layman, to assist him in the selection of a skillful practitioner? None! Still we daily condemn him for his lack of judgment. Dr. Murphy advocates the education of the public, through selected, appropriate, articles printed under medical sanction in the daily and weekly papers, and advocates further that in every city, there should be publication committees on lay press publications. When authorities, or individual laymen, wish authoritative information, they should be taught where to turn for it, and where they can obtain clean cut, positive, and authentic information. If the committee lack in any particular information, it could be obtained from the central council on public education. In other words, it should furnish the public—which it is entitled to—a most succinct and accurate knowledge of the general purport of medicine, especially on the common infections and contagious diseases, their etiology, means of transmission, early signs of disease, etc., along

with knowledge, of meaning of delay, in care of such diseases. Moral and physical hygiene, etc.

He points to the fact that up to date the patent medicine almanac, quack advertisements, and leaves of healing, are the principal means of instructing the public. When the doings of the medical profession have crept into print it is usually so meaningless that medical men themselves are either amused or annoyed. He says, "When we supply it with medical education based on science, it will become affiliated with us, and sustain us in our every effort. The education of the public is the most important obligation of the profession. As this advances, our science and our art will receive the admiration and support, which true worth once understood, always commands. The gross and unpardonable indifference of the people, to their own welfare—he goes on to say—and that of their children and neighbors, is more discouraging, and a greater barrier to progress than active opposition. It requires some great calamity to arouse the dormant public mind to an appreciation of its interest and responsibilities, and to the penalty it pays for its inactivity. In order to affiliate the public in good work, he advocates the establishment of a public health journal by the A. M. A. to be distributed by subscription to the laity. It should have an associate staff composed of sanitary engineers, sewage and water engineers, sociologists, tenement workers, school teachers, child welfare workers, and others with allied purposes. Such a journal should appeal to the general public, to commercial interests, to employers of labor, to school boards, and especially to mothers and home interests. In this matter the Doctor seems very much awake recommending that the House of Delegates of the coming A. M. A. be instructed to appoint a committee to confer with the American Public Health Association that they may possibly formulate some move to stimulate its growth. He also recommends that a proposition be sent to the National Education Association, to meet on the 11th inst., in San Francisco, with greetings from our own National Society, in recognition of the great work done by the Educators of this country, by way of physical betterment in schools, and who will be more in position to influence the young mind, and sow seed which will grow into its nature and abide in the future for good, suggesting that the committee arrange for an annual co-operative Symposium, at both meetings on pertinent subjects. A proposition is made that the Council of Public Health and Public Instruction should send health lecturers into every county of the Union, also educational folders, leaflets, public press articles, etc., for the use of local committees, that they may reach the public through this source and agency. When the people are educated and interested, they will support and enforce every proper method for their betterment, and eventually we shall have as scientific an organization for

the protection of the health of the public and their interests as we now have in the Department of Agriculture for the health of animals and plants. He thinks this movement would be irresistible. The physician, he assures, is the natural standard bearer, the people, the great beneficiary. The latter will, however never sustain him in this position unless they have the utmost confidence in him. They will not enlist as his co-workers, until he shows that he possesses and practices a standard of morality and integrity that is irreproachable.

It seems to us that this sort of move has behind it a fund of very sound practical wisdom, sending out the true ring of metal formed in the crucible of a scientific thinking age. That it will meet with the approval of all fairminded men, we have not the least doubt. The public is aware of its need of knowledge, is open to conviction, as our religious brethren would say: if we do not supply its needs, it has the independent spirit, to seek it elsewhere, though it may be duped much of the time, it has the appearance at least, of getting what it has gone after.

In a recent editorial in the A. M. A. Journal, our attention was called to the rapid awakening of the public to its physical needs. More especially to the crystalization of public opinion on the common drinking cup, and the campaign against the common fly, and remarks that if any one had predicted only ten years ago that American newspapers and civic organizations would inaugurate a definite campaign against flies, he would have been regarded as hopelessly visionary. Yet the Civic Association is rapidly enlarging its scope in this field, which work has been augmented by the Assistance of the American Academy of Political and Social Science, and carries on by the daily and weekly newspapers, in a most effective educational campaign.

In the latter part of 1908 Dr. Melvin G. Overlock of Worcester, Mass., began, as a State Inspector, a series of lectures at noon hours, for factory hands; the object was, to instruct these persons in the importance of such measures in a commercial sense. Out of this grew what is known as the Worcester or Overlock Idea; it not only has been of vast individual good, but has given rise to a benovolent side, that of inducing the employers to bear certain sanitarium expenses of those afflicted with tuberculosis, who had been in their employ one year. Under this plan, there have been over one hundred patients treated from the county of Worcester alone, out of which a large percentage have been returned to their homes and work, cured. So popular has this idea become, that it has met with the commendation of many men and women throughout the country, President Taft being numbered among its strongest

eulogists. A general summing up of the good that has been begun and the benefits already repeated. This generation seems to have been well launched, which also betokens a bright future for the conservation of health and of the race.

THE NEW EPIDEMIC.*

GEO. E. CRAWFORD, M. D., Cedar Rapids, Iowa.

My title is somewhat of a misnomer from the fact that the disease referred to which forms the subject of this brief paper is not altogether new, neither has it prevailed in this vicinity with sufficient frequency to really deserve the name epidemic. But in several places in Iowa during the past season large epidemics have occurred, running into hundreds of cases in a single community. Perhaps most of you have, during the past winter and spring, met with some cases of acute febrile disease, which had certain characteristics with which you were not familiar; and which you may have regarded as I did for some time, as a new type of the grippe, which seems to have the habit of changing its type somewhat each year. But as you saw more of it you noted that it had certain constant symptoms which are not characteristic of the grippe, notably swelling of the cervical glands just below the ear, sometimes on one side and sometimes on both. In this you may have joined with the laity in calling some of these cases mumps, but soon found that these cases of supposed mumps never progressed any farther than the beginning, and it soon became evident that the parotid gland was not involved at all, but the cervical glands under the upper part of the sterno-cleido-mastoid muscle.

This, with frequent middle ear involvement, and certain abdominal signs and symptoms gave a clinical picture distinct from grippe, and differing from anything with which we were familiar. I think all of you eye and ear men will testify that you have had a very unusual number of middle ear and mastoid cases the past year.

It soon became evident to the careful observer that these were cases of glandular fever of Pfeiffer, or acute epidemic cervical adenitis. The disease was first carefully described by E. Pfeiffer in 1889, although cases had been noted, and completely studied, by other observers some years before this. Pfeiffer describes it as a disease of children characterized by acute onset with fever, congestion and more or less inflammation of the tonsils and pharynx, accompanied by swelling, tenderness, more rarely suppuration, of the cervical lymphatics, especially of those lying behind the upper portion of the sterno-cleido-mastoid muscle; sometimes bilateral but more frequently unilateral. Enlargement of the liver and

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spleen is present in most cases; in many to a marked degree, and acute nephritis is not infrequent, and the most serious complication. Constipation is frequent though diarrhoea may mark the onset, and was considered by Pfeiffer as due to an involvement of the abdominal lymph glands. The disease is contagious, and occurs mostly in localized epidemics. Its course is usually mild; but in this, it varies greatly like most other epidemics in severity, and frequency of serious complications. While it has been regarded essentially a disease of childhood, different epidemics vary in this regard, and in some places quite as many adults, especially young adults, are affected as children.

In some epidemics constant unilateral involvement of the glands with a large percentage of suppuration has been reported, while in the recent epidemics observed the cases are about equally divided between unilateral and bilateral involvement, with very few cases of suppuration.

The disease usually prevails in the late winter and early spring months; though the extensive epidemic at Burlington began the first of November; and I had a marked and typical case as late as the first week in June. Many cases have been observed to follow other disease such as influenza, measles and scarlet fever, and it is probable that the lowered resistance and malnutrition resulting therefrom only acted as contributory cases. The occurrence of cervical adenitis, with inflammation of the tonsils and pharynx and occasional nephritis, has suggested to some observers that the disease was abortive scarlatina, or diphtheria. But so many of the cases have had one or both these diseases before or after the attack of glandular fever that the hypothesis seems to have little to recommend it. Besides there are other constant features of the disease that are not present at all in scarlet fever or diphtheria.

The bacteriological reports are conflicting and indefinite. While it is practically certain that the disease is due to a specific germ, so far it has not been definitely isolated. One investigator has claimed to discover a germ very like the germ of bubonic plague, and has advanced the theory that glandular fever or cervical adenitis is an attenuated bubonic plague. This idea has not seemed to receive any favorable recognition from the profession. The constancy of slight inflammation of the tonsils and pharynx, with some pain on swallowing, and the characteristic involvement of the glands which directly drain this area point to this region as the portal of entry. The severity and extent of the subsequent adenitis would seem dependent on the degree of toxicity of the organisms, and the condition of the patient. Thus in some instances we have general infection as indicated by the involvement of many groups of lymphatics, remotely separated, in others only a localized process, confined to the glands in one side of the neck.

The length of the period of incubation is not definitely settled, but seems to be usually from 7 to 10 days, from the time of exposure until symptoms are manifested. The onset may be sudden with rigors or chill, fever, headache, pain in the limbs, sore throat, or it may be preceeded by two or three days of indisposition and general malaise. The temperature elevation is usually moderate, 101.5 to 103 but may reach 104 or 105, and is higher than would be expected from the local manifestations.

It is commonly remittent, being higher in the evening, and in some cases the temperature curve is very irregular with intermissions. The inflammation of the naso-pharyngeal and tonsillar region is only moderate in degree as compared with an ordinary tonsillitis, and in some cases with unhealthy tonsils there may be a slight filmy exudate, but the local pharyngeal symptoms are usually slight.

Nausea and vomiting sometimes mark the initial period, and constipation is the rule, but diarrhoea may occur, and was regarded by Pfeiffer as related to an involvement of the abdominal lymphatic glands. Within 24 to 48 hours after the onset as a rule swelling of the glands under the sterno-cleido-mastoid muscle is palpable, although it may be delayed until the 4th or 5th day in some cases.

The swelling usually appears on the left side, and in a large percentage of cases is confined to that, but may appear on the right side from one or two to several days later. The enlarged glands vary in size from an olive to that of an egg. They are usually discreet, firm to the touch and very sensitive. The skin over them is normal as a rule.

While the affected glands usually remain discreet, the tissues may become matted together into a diffuse mass of general swelling. There is tenderness and stiffness of the neck, partly due to the tender glands and partly due to the febrile myalgia affecting the whole body.

The sub-maxillary glands are less commonly affected. They do not seem to be directly in the infected lymph current, as they drain the buccal and tonsillar region, while those usually affected drain the naso-pharyngeal region. This would indicate that the atrium of infection is the nose and throat.

The middle ear also tends to show involvement in many cases, but not in all. This is probably simply an extension of the original local inflammation. Sometimes the axillary and inguinal glands are affected. But the mesenteric and mediastinal glands are the ones most frequently affected after those of the neck. The spleen is usually more or less enlarged and often becomes palpable. The liver is usually enlarged and pushed down by the enlargement of the glands behind it. The spleen and liver are generally tender, as is the abdomen when the mesenteric glands are involved. The duration

of the fever varies from two or three days to ten days or more, and like every other feature of the disease is subject to wide variation. The glandular enlargement remains for several days, to as many weeks in some cases, and after the fever subsides the liver and spleen go slowly back to their normal place and size.

A few cases have been submitted to laboratory tests. J. R. Clemens in the *British Journal of Children's Diseases* reports an epidemic of 16 cases in a male orphan's asylum, and these cases all showed a high opsonic index for *staphylococcus albus*, and leucocytosis.

Dr. T. W. Terflinger of Logansport, Ind., reports an epidemic occurring in the Northern Indiana Hospt. for the Insane, where 150 adults were affected ranging in ages from 18 to 80. "Severe types were announced by a rigor and rapidly rising temperature to 103 or higher, splitting headache, pharyngitis, muscular soreness and pain in the back and legs." "Often the cervical lymphatics would swell to the size of a guinea's egg in the course of 24 hours, and movements involving the muscles of the neck would be exceedingly painful if not impossible. In some cases the swelling was not great and the glands remained discreet, and in others they became glued together and the entire side of the neck would present a great swollen mass with no individual glands palpable. In the majority of these cases the swelling was unilateral, but in many instances both sides were involved; the left side first, and the right side during defervescence of the left or after apparent recovery." In none of this series of adult cases did suppuration occur.

From Drs. Carl Stutsman, Burlington, and J. H. Chittum, Wapello, who studied a large number of these cases during the recent epidemics, I have through personal communications most valuable observations. There were reported in Burlington approximately 250 cases between November and the beginning of summer, with doubtless a large number of unrecognized cases.

As Dr. Stutsman gives his report in answer to direct questions, I can not do better than give the answer in his own words:—What are the typical symptoms? "In adults usually a chill, nausea, headache, and general aching, with painful cervical adenitis, commencing sometimes immediately after the chill." Usual duration of the disease? "Two or three days to as many weeks; average I should say five to seven days."

About how long do the glandular swellings remain? "Until after all other symptoms have ceased, occasionally as long as two months or more." About what percent have swellings only on one side? "I should say about 50 per cent." Are some of the cases slow in recovering from the effects, "Yes, particularly if not confined to bed long enough. Relapses are frequent. Out of 40 cases I had 3 very sharp attacks of nephritis, two in children, one adult.

All of these cases came on late, not in the first few days as stated in the books. Middle ear disease quite common. Suppuration of glands rare. I had none and could only get reports of two cases occurring here. Leucocytosis marked, as high as 38,000 in one case. A considerable proportion of cases occurred in adults, say 25 per cent of all. The literature will lead you to think it is rare in adults. Tendency to relapse or recrudescence is very pronounced, even after convalescence is well established." "My experience impressed upon me the great importance of frequent examinations of the urine (I had several cases of albuminuria besides the severe cases) and confinement to bed until full recovery. One of my cases of nephritis, a little girl still shows occasional albuminuria and hyaline casts after 8 months on strict diet. She had a relapse of the fever and the nephritis after apparent recovery from both. This I feel could have been avoided by early and prolonged confinement to bed."

I give the following points from Dr. Chittum of Wapello, where they had an even more extensive and severe type of the disease than at Burlington. "As to the typical symptoms—the clinical pictures varied as much as those of influenza. The most constant symptom was glandular enlargement, lymphatic, especially cervical, liver, spleen etc. I think in every case the cervical glands were enlarged. In some the liver extended below the umbilicus. In most cases there were gastro-intestinal symptoms; in some quite severe and protracted. Complications were numerous, the most serious being acute nephritis. We had three deaths from that complication, one being a woman 45 years old. We had three children who had facial erysipelas at the same time, whether this had any relation beyond lessening the natural resistance is doubtful. Many of the cases were so mild that no physician was called. Most patients complained of pain and soreness of the throat, with very little appearance of trouble on inspection. In no case did suppuration of glands occur."

From these various observations it is evident that we have a specific acute contagious disease usually rather mild in character, but often severe and distressing, profoundly affecting the lymphatic glandular system, the liver and spleen, and disturbing the normal functions of the economy, and subject to various complications, the most serious of which are nephritis, endocarditis, middle ear and mastoid involvement, and suppuration of glands. This being the case it is most important that these cases be promptly recognized, have careful attention, be confined to bed, until convalescence is well established, with frequent examination of urine. From the almost constant presence of leucocytosis it is important that a careful blood study be made of these cases. Under careful supervision

the progress is generally favorable. Fatalities are usually due to nephritis, and endocarditis, and these serious conditions are doubtless often aggravated if not induced by lack of care. With our present limited knowledge of the disease the treatment is necessarily symptomatic.

CONTRACTED PELVIS FOLLOWED BY CAESAREAN SECTION.

J. A. CAHILL, M. D., Volga City, Iowa.

The literature on Caesarean Section is fairly voluminous. In the last decade our knowledge of asepsis, our hospital facilities and our advancement in post-operative technic has greatly promoted the safety of this procedure. But from the standpoint of the general practitioner with conditions as they generally present themselves, the operation is a serious undertaking. I was much impressed with the ease with which the preparation could be made; in my case it was out of the question to remove patient to hospital, as she was already in labor at the time. I decided to operate and made preparations accordingly.

History:—Patient, Mrs. D., age forty-three, house wife, married ten years. As a girl, menstruated regularly every four weeks, beginning at the age of sixteen; has enjoyed good health all her life; menstruated last, September 22nd, 1910; consulted me at the second month stating she had missed menstrual period, not dreaming of pregnancy. I examined her three weeks later and diagnosed pregnancy. Did not see patient again until labor began, as she had no trouble during that time.

Present Pregnancy and Labor:—Was called on the morning of July 24th, 1911, to see patient. Pains began about three hours previous and occurred every fifteen or twenty minutes on my arrival. Vaginal examination revealed ruptured sac and cervical dilatation to the extent of a silver dollar. At this time I observed a very high cervix position of child R. O. A. I left patient and returned in about four hours; found that labor had progressed very little but cervical dilatation was complete.

On second vaginal examination I found I had to deal with a contracted pelvis. The diagonal conjugate measured nine and five tenths cm, thus allowing seven and five tenths cm for the conjugate vera. At this time patient had been in labor twelve hours. I then called an assistant who administered chloroform and I applied high forceps with fruitless results, as it was impossible to deliver head through bony canal.

As all parties concerned were of the Catholic faith, craniotomy was out of the question, and on account of patient's frail makeup, symphysiotomy was also discarded. I then advised Caesarean Sec-

tion as the family were very anxious for a living child and prepared to operate at once. She was then sixteen hours in labor.

Operation:—Ordinary field of operation prepared as usual. Left median incision 12 inches long; abdominal cavity walled off; uterus brought in view through incision; central longitudinal incision in uterus; amniotic sac incised; child extracted; placenta detached; hemorrhage controlled by hot packs and rubber tube encircling neck of uterus. Abdominal cavity mopped well, also uterus. Sutured uterus with No. 4 catgut in two layers; sutured abdominal wall in usual way, using flap method for fascia.

Post-Operative History:—The time of operation was twenty-four minutes. The patient stood it well and returned to her bed in excellent condition. There was considerable pain for the first forty-eight hours, which was easily controlled with small doses of morphine; nausea and vomiting during the first hours, the nausea continuing for four days. In other respects she made an uneventful convalescence. When last heard from, both mother and babe were in excellent condition.

This case is one of the many to which we are sometimes called hurriedly and under unfavorable environment, and must act accordingly, even through taking desperate chances. Notwithstanding these unfavorable conditions, we are often happily rewarded.

Owing to the extra amount of space devoted to scientific papers in this issue, the editorial and society department are abridged. All the papers here presented merit careful and painstaking study. We publish considerable in excess of the usual number of pages in order to present these papers in order.

In a future issue, we will publish a list of the membership of the county and state societies.

Maurice H. Richardson, M. D.—The only treatment of breast tumors which as yet gives any real hope or permanent cure is thorough removal. Operable cancer of the breast must not be subjected to any other method, because of the loss of precious time. I am obliged, at the beginning of my paper, to give the greatest emphasis to this opinion, because I have seen so many preventable disasters caused by this source of delay in resorting to the knife. And it is not at the hands of the inexperienced or of the empirics that I see these disasters, but in the hands of men experienced in the treatment of cancer, who have become convinced of the efficacy of non-operative methods and who cannot perceive the most glaring failures of their methods. The most pathetic instances of this kind of failure have been through months or years of x-ray treatment, during which the patients have gone from operability to glaring hopelessness.

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D. S. FAIRCHILD, M. D.....	Clinton
EDITOR	
C. A. BOICE, M. D.....	Washington
ASSOCIATE EDITOR	

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Clinton, October 15, 1911

No. 4

The Delay in Publishing State Society Papers.

There has been some delay in getting on with publishing the papers of the Society. The manuscript only reached me about Sept. 1st. "The responsibility for this lies wholly with Dr. Bierring." While the official stenographer was hopelessly struggling with the translation of Dr. Bierring's discussion on "Bloodless Conditions," while the editor was perspiring and filled with anxiety, losing sleep and visibly declining, while the medical public was anxiously waiting for proper intellectual food, the author of all this distress was serenely reposing beneath palm trees and amid roses, inhaling the balmy air of southern California; dreaming, let us hope of the old Spanish days when senors and senoretas raced, drank, gambled and made love; before the advent of the hurrying money making Yankee who saw in flowers only a money value; ornamented the fields with placards "Acreage for Sale" and figuratively pinned to all the door posts notices "For Sale at 100 per cent. Profit." Knowing however the uncertainty of human affairs, we have provided against the future some very good things and now that the trial is over, we entertain a spirit of forgiveness.

Medico-Legal.

In this number of the Journal, we are reprinting the rules adopted by the Committee on Medical Defense. We trust these rules may be carefully read. This is a very serious business and should not be passed over lightly. Every physician and surgeon should have constantly in mind the risk he is taking in practicing his profession and not wait until notice of suit is served and then comfort himself by declaring against dead beats and shyster lawyers

but should be constantly watchful. There are now pending twenty-eight cases of malpractice against members of the profession in Iowa. Eight new cases have come up since the first of April. Some of these cases will die out of themselves but there is a degree of persistency on the part of many claimants that is hard to overcome. The work of the Committee is not merely that of fighting cases but goes much beyond. Every case must be carefully investigated, the elements of danger carefully estimated and the reasons and motives carefully inquired into. We frequently get letters from doctors announcing in the briefest terms that they have been threatened or sued for malpractice, perhaps forwarding a copy of the petition. What are we to defend? We do not know. After a delay of from one to three weeks, we get a report, sometimes full and explicit, sometimes so indefinite that several letters of inquiry are necessary. The only thing that we are sure of is that the plaintiff is a "dead beat" and the lawyer a "shyster." This does not help us any. We cannot go into court without the same preparation that a corporation makes. We must know all about the case. Doctors are not insurers of a cure and the law only requires that reasonable care shall be exercised; such responsible skill and care as is usually possessed by physicians and surgeons in like communities. This is all very simple but there are often technical difficulties which makes the questions of skill and care quite different from what they really are. The doctor is called to a case; he knows what he ought to do but the patient objects—for instance to taking an anesthetic in case of fracture or the application of a certain confining splint, etc., and declares that he does not care about the results, etc. The doctor compromises against his better judgment. When finally the case is over, there is a deformity or shortening and patient complains of the result; denies that he agreed to abide by the result, and his family and friends testify that there was no such conversation as the doctor alleges. He has no witnesses and the preponderance of evidence is against him. He is certainly in an unfortunate position. He ought to have had a consultation or refused to take the case unless the patient would fully and implicitly co-operate with him. There is no sentiment in these cases. It is wholly a matter of business. The doctor's fortune and professional reputation are at stake. In cases we have investigated, there has been but little evidence of want of skill but there have been cases of legal technical error, and there have been in some instances of want of watchfulness. The doctor can better afford to make visits which he knows will not be paid for; better to go to some expense in x-ray examinations than to have a malpractice suit. He should never feel safe when he has a fracture case on hand; should exercise the utmost patience in meeting the complaints of his patients, never get angry or excite a revengeful spirit by saying or doing

harsh things. The committee do not desire to preach any sermons to the profession but would like to help educate the profession to an understanding of the necessity of watchful care. The men who exercise the most watchful care and the highest degree of skill will sometimes be subject to prosecution. This, of course, cannot be wholly avoided. The committee want to know all these things. The doctor had better suffer a little humiliation than to have a judgment against him. We have known some lofty self sufficient doctors who could manage their own affairs without help, come to grief.

Now doctor, when these unfortunate things come to you, let us know at once all the facts. We will put the case in the hands of one of the most experienced lawyers in the country. He will advise the employment of such local legal assistants as he may need. The committee will work with our attorney on the medical phases of the case, and the result will be reasonably certain. Your case will be taken care of, only you must furnish very complete and reliable information. No compromise will be made without notifying you and you will be advised of the various steps taken in your case but there must be no divided responsibility. We cannot hope to succeed if a number of independent attorneys are at work on the case.

Rules Governing the Members of the Iowa State Medical Society with Reference the Defence Fund.

ONE

The object and purpose of maintaining a Defense Fund is not to aid in defeating any just claim which any person may have against any member of this Society for malpractice. The Society recognizes that sometimes mistakes may occur with the most careful and skillful physicians and surgeons, and the Society, through its committee, will use all just and honorable means to bring about a fair settlement of any such cases. The necessity of maintaining such fund arises out of the fact that nine-tenths of the suits brought against doctors for alleged malpractice are little less than blackmail. Experience shows that the great majority of such cases are brought without any purpose of prosecuting them to judgment, but only with the view of forcing the doctor to settle rather than to go to the expense and publicity of a trial.

Every member of the Society is interested in such litigation, because every dollar that is paid upon unjust claims in settlement thereof is encouragement for further attempts to extort money by such methods. In the organization of the Defense Fund it is the purpose of the Society to aid its members in defending against these attempts at extortion. The expense of making a proper defense is a burden to many members of the Society, and inasmuch as all are interested in defeating unjust claims, it is no more than just that all members contribute to aid in such defense.

TWO

It is not intended that the benefits of the Defense Fund shall be available for the purpose of aiding in controversies over bills for services, and in case an action is brought by a doctor to recover for his services and the defendant simply sets up a counter-claim to the extent of the bill or for the purpose of defeating the bill, asking no affirmative judgment beyond the amount of the bill, such doctor shall not be entitled to the benefits of the Defense Fund. Where, however, an action is commenced upon a bill and a counter-claim is filed for malpractice, or an independent action is filed for malpractice in which the patient claims a judgment against the doctor in excess of the amount of the bill, then in such case the doctor is entitled to the benefits of the Defense Fund the same as if no action had been brought by him.

THREE.

Experience shows that many malpractice suits arise out of a controversy over bills for services. For this reason it is the judgment of the committee that in all cases where there is any serious controversy about a bill for service the doctor ought to submit the matter to the attorneys for the association before commencing suit upon the bill. The purpose of such submission is not that they shall render any service toward the collection of the bill, but that from experience in such matters they make suggestions with reference thereto which may avoid litigation and prevent the commencement of an action for malpractice.

FOUR.

Whenever an action is commenced or threatened, the doctor should write to the attorneys for Association—making a full fair statement of the facts so that they may advise the doctor at as early a time as possible with reference to the action or the threatened action. In many cases advice may be given which will avoid litigation.

FIVE.

In all cases where a notice is served upon a member of the Society of a suit or contemplated suit, the same should be sent FORTHWITH to the attorneys for the Association, in order that no disadvantage may result from delay.

SIX

Members will understand that in the commencement of any action in the District Court a notice is served at least ten (10) days before the term for which suit is brought, and that this gives plenty of time to communicate with the attorneys for the Association so that rights may be fully protected.

SEVEN.

In connection with any notice so sent to the attorneys, the members should send at the earliest possible date a full statement of

the facts pertaining to the case. The attorneys will communicate with the committee with reference to such statement of facts, and the committee will render such service as is possible, both to the attorneys and to the doctor.

EIGHT.

While in most cases which actually come to trial it will be necessary to have local counsel to cooperate with the attorneys for the Association, such local counsel should not be employed until after communicating with the attorneys for the Association. In many cases the cases will be dismissed or otherwise disposed of without trial, so that the expense of local counsel may be avoided.

NINE.

It is of the utmost importance that members of the Association shall be guided by the foregoing rules, and IT IS HEREBY EXPRESSLY DECLARED that where the member of the Association does not comply with the foregoing rules he shall not be entitled to the benefits of the Defense Fund, unless upon proper showing to the Medical Defense Committee satisfactory excuse for not complying with the rules is established.

TEN.

The Association will pay for the services of local counsel, provided they are employed under the direction of the regular attorneys for the Association, and not otherwise.

ELEVEN

The Association will not pay court costs or any judgment or other expense of its members.

TWELVE

Address all communications about cases to Wade, Dutcher & Davis, Iowa City, Iowa.

THIRTEEN

Members should carefully read these rules, because they must be strictly observed to obtain the benefits provided.

MEMBERS OF THE COMMITTEE

D. S. Fairchild, Chairman.

L. W. Littig, Secretary.

A. L. Wright.

M. J. Wade, Attorney for the Society.

Review of Session on Practice of Medicine, Los Angeles Session, A. M. A.

The purpose of the medical section is to have an avenue for presenting subjects that are closely related to the practice of medicine. Although many of the contributors to the program of the Los Angeles meeting came a long distance, the number of absentees was remarkably small. As a whole the program was most creditable to the officers of the section, and the subjects presented were

of timely interest, and in keeping with medical progress.

In brief resume it is hardly possible to give more than a summary of some of the more distinctive papers.

Under the title of "Successful Treatment of a Typhoid Bacillus-carrier by Vaccination, by Walter Brem of Cristobal, Canal Zone. reference was made to a patient, a white American girl, aged 4 1-2 years, who had typhoid fever in the Colon Hospital in August, 1910. She was given 3 grains of hexamethylenamin three times daily for two weeks during convalescence. Shortly afterwards her father and mother developed typhoid fever. On December 7th and afterward, numerous typhoid fever bacilli were found in the child's urine, the stools being negative. She was vaccinated nine times with autogenous vaccines between Dec. 10th, 1910 and Feb. 1, 1911, the doses being gradually increased from 25 to 500 million. As vaccination proceeded, the number of bacilli gradually decreased until on Feb. 15th, the cultures were negative. The agglutination power of the patient's serum increased to 1000 against the typhoid stock culture and her own organisms. The time during which typhoid bacilli were present was about six months. The phenomena observed in this report suggest a chronic lesion slowly healing under the influence of vaccination, and also indicates a possible means of effectively treating the human typhoid carrier.

An interesting paper on Chronic Interstitial Nephritis, by Dr. Edward F. Wells of Chicago, referred to the existence of a reserve renal capacity. While renal insufficiency is the rule, and in many instances this is very marked, however, observation shows that in some of these cases material and even great reserve capacity may be discovered, and such may be true of others.

The essayist urged that in studying these cases attempts should be made to discover and measure the reserve, in addition to the ordinary functional capacity of the kidneys, for the purpose of strengthening the foundations of rational prognosis and treatment.

Speaking evidently from the results of a very wide experience with diabetes, Dr. A. J. Hodgson of Waukesha, Wis., presented some interesting facts pertaining to the treatment of this disorder. Special emphasis was given to the fact, that most cases of diabetes mellitus are due to errors of metabolism, through a small proportion result from some severe pre-existing pathologic condition, yet a majority of cases are due to long-continued gross errors in eating. The main object to be aimed at in treatment is the correction of this error, but a disease of such long-time developing can not be relieved quickly.

While a diabetic must not be fatigued, yet the patient should be kept physically active, but mentally indolent. Plenty of mildly alkaline water is to be given and quantity of food is just as important as the kind of food. As tolerance is established great care

is to be exercised in prescribing carbohydrates, and a timely warning is given against the dangerously high starch-content of many gluten flours on the market. In order to obtain the best results a need of control over patients, especially children, is a most important factor in obtaining results.

The relation of the symptomatology and pathology to operative mortality in exophthalmic goitre as presented by H. S. Plummer of Rochester, Minn., with the discussion by Dr. Charles H. Mayo, was an interesting contribution to this subject.

From their observations the operative results are largely dependent on the degree of thyroid-toxemia that exists, and the mortality is closely related to the extent to which symptoms of toxemia and evidence of pathologic change in the thyroid and other tissues are present. This appeals to one as a logical explanation and is consistent with the modern conception of the thyroid origin of exophthalmic goitre.

In the symposium on Syphilis arranged for Wednesday morning, the distinctive paper was that by Dr. Frank Billings of Chicago on Visceral Syphilis. Attention was directed to the frequency of gumma of the liver and syphilitic hepatitis particularly in city patients. Intermittent fever with chills, enlarged, palpable and tender liver, occasional jaundice, leucocytosis and moderate secondary anemia are usual symptoms. An interesting fact is that rest will often bring about a symptomless, latent state, and recurrences occur over many years. Syphilitic aortitis and arteritis of various types result in aneurysm, and myocarditis. A syphilitic nephritis can be recognized. Visceral syphilis is tertiary syphilis and the treatment recommended is mercury, iodides, and salvarsan.

One of the most interesting and instructive demonstrations in the Scientific Exhibit was that which illustrated the ground squirrel transmission of bubonic plague. On this was based a paper by Dr. G. W. McCoy of San Francisco and discussed by Rupert Blue of the U. S. P. H. & M. H. Service. The origin and conveyance of the disease in the ground squirrel has been studied principally in California, and the Government has instituted a rather unique method of combating this danger, by establishing so-called squirrel hunters somewhat after the plan of the forest ranger, whose duties consist in shooting all ground squirrels in their district. During the past year 150,000 squirrels had been killed in California by these Government hunters, and the hope is entertained that within two or three years the ground squirrels can be exterminated, at least in the districts adjacent to possible plague centers.

The annual oration in medicine this year was delivered by Dr. C. F. Hoover of Cleveland, on the subject "A Clinical Study of Disturbances in Rate and Rhythm of Respiration." In the observation of patients, we are wont to devote much attention to the condi-

tion of the circulation and analyzing the significance of pulse changes, cardiac irregularity, and weakness, yet give only scant attention to respiratory changes; the character and difficulty in breathing is recognized, but what it signifies and the relation it bears to the disease process is often disregarded.

It was with this thought in mind, that the work was undertaken by Dr. Hoover, to form the basis of the oration. As a clinical study it was original, for it was directed along an entirely new line of thought, and in a subsequent discussion, Professor Henderson of the Physiological Department of Yale Medical School, referred to it as the first clinical study of the physiology of respiration to appear in American medical literature.

The program closed with a symposium on Poliomyelitis, arranged jointly with the Section on Diseases of Children, in which Samuel G. Dixon of Harrisburg, Pa., R. W. Lovett and M. W. Richardson of Boston contributed the principal papers. It is doubtful if the subject could ever be presented more completely, for in the number of cases studied, statistical analysis of the local incidence of the disease, epidemic centers, possible factors in transmission, studies in experimental poliomyelitis, and occurrence of paralysis in domestic animals, it seemed to cover every phrase of the subject. The value of hexamethylenamin as a therapeutic agent, especially in the abortive cases, was generally recognized.

The discovery of the causative agent seems probable within the near future, which will greatly help to develop a specific curative remedy.

The studies by Iowa physicians during the epidemic of 1910 as published in the Iowa Board of Health Bulletin, coincide well with the observations made in other states.

While the disease is eventually incident to certain localities it manifests a tendency to gradual spread, the urban population and children in institutions being relatively immune, while the tendency of a two year periodicity is generally recognized, which is evident also here in Iowa, since the number of cases reported for this year is considerably less than last year for the same period of time.

Walter L. Bierring.

MEDICINE IN IOWA FROM ITS EARLY SETTLEMENT TO 1876.

D. S. FAIRCHILD, M. D., Clinton, Iowa.

Dubuque County.

Dubuque county consists of 16 1-2 congressional townships of rolling land with very little of marshes, swamps or lands subject to overflow. The eastern part is broken and hilly and all parts are well watered by springs, brooks and creeks.

Medical Society.

The preliminary meeting for the organization of what is now

the "Dubuque County Medical Society" was held Nov. 4, 1852 and the organization was finally perfected Jan. 11th, 1853, as the "Northwestern Medical Society" and includes northeastern Iowa, southwestern Wisconsin and northwestern Illinois. A Constitution and By Laws and Code of Ethics of the American Medical Association were adopted. Dr. George W. Richards was elected president. Meetings were held monthly which have been sustained with commendable spirit by a majority of the profession. Since its formation about 50 names have been enrolled upon the records of the Society. Only two members who aided in its organization, now (1875), retain their connection with the society. The present membership is eighteen (1875). The meetings have generally been devoted to the presentation of reports of interesting cases and their discussion; although a number of very creditable papers have been read at different times before the society.

Pioneer Physicians.

Dr. Frederick Andros, a native of Mass., graduated from the literary department of Brown University in 1822 and from the medical department in 1826. He came to Dubuque in the fall of 1833, opened an office and remained until 1837 when on account of ill health, he removed to Clayton county and engaged in farming. In 1845, he resumed practice, having received the appointment of surgeon at Fort Atkinson and the Winnebago Agency, where he remained until the Indians were removed to Long Prairie, Minnesota-1848. Dr. Andros went with the Indians and remained with them until 1854 when he returned to Garnaville, Clayton county, and resumed practice. In 1861, he removed to McGregor where he now resides, (1875).

During his residence in Clayton county, Dr. Andros filled a number of public positions with credit to himself and to the satisfaction of his constituents. He was a member of the Territorial Legislature. He was also a member of the American Medical Association.

Dr. Andros was truly the pioneer medical practitioner of the state, having come to it when it was an unbroken wilderness and for 43 years, nearly half a century, was known to the rapidly growing population as the "Good Physician and Public Spirited Citizen."

Dr. John W. Finley, a native of North Carolina, came to Dubuque from Missouri in 1856. He received his preliminary education at Jacksonville, Ill., and his medical degree from the Ohio Medical College.

Endowed by nature with great powers of enduring fatigue, Dr. Finley engaged in the practice of his profession when the county was a sparsely settled wilderness, made long and tedious journeys on horse back, over bridle paths and endured hardships that would have overcome the majority of men. He built up a large practice

to which he devoted himself closely until the autumn of 1874 when ill health, the result of an injury to the head received by being thrown from his buggy in August 1856, compelled him to withdraw from practice and seek a change of climate which he did by spending a year in California.

A severe epidemic of cholera visited Dubuque in 1852 and a milder epidemic in 1854-55. An epidemic of cerebro spinal meningitis visited this vicinity in the winter of 1871-72, appearing in December, reaching its height in February and disappearing in March. There being no provision for reliable statistics, only an approximation could be arrived at either as to the number of cases or mortality. Upon the latter point, those best qualified to judge, placed it as not exceeding 25 per cent. The most successful plan of treatment was a liberal use of narcotics.

The total number of physicians practicing in Dubuque county. (1875) is 35—34 males and 1 female. Classified as follows:—

Regulars—27 of whom 23 have diplomas. Homeopaths 7. Eclectic 1.

The following are the important surgical operations which have been performed in Dubuque county. There have been three cases of ovariectomy, all successful (1875).

Dr. Staple's case, May 1871. Mrs. S. 28 years, married, Irish descent, had never borne children, recognized an abdominal enlargement a year prior to operation. Was never tapped until near the time of operation, for diagnostic purposes; sac and solid parts of tumor including contents weighed 40 lbs. Slight adhesions walls; pedicle secured by clamps; wound closed by six sutures and two wire sutures. Patient discharged in seven weeks, a slight fistula persistent for some time but complete recovery finally.

Dr. McCleure's case, June 1874—Mary F. single, age 18, Irish descent. Abdominal tumor 3 years duration. Ovarian cyst including many small cysts. At time of operation, as large as women at seven months pregnancy. Omentum adherent; vessels secured by silk ligatures; pedicle secured by clamps; wound closed by silk sutures. Recovery rapid and patient left for home in six weeks, entirely well.

Dr. Asa Horr's case, June 1875, married, age 38, previous health good. Left ovary "Solid Tumor" 24 inches in circumference, particularly adherent; profuse hemorrhage. "Seven silk ligatures cut close and left in." Several came away afterwards with the discharge. Pedicle secured by clamps. Right ovary and small uterine fibroid also removed, the abdominal cavity washed out freely with solution of soda. Recovered without bad symptoms. Went home at the end of three months with small fistula at lower part of abdomen from which there was slight drainage. Recovery perfect.

Dr. Horr's case of Lithotomy. Farmer, age 48, had suffered

eight years. Removed by lateral operation. Calculus kidney shaped, two inches in longest diameter. Died the second day.

2nd Case; boy, age 4 years, removed by median operation. Calculus egg-shaped 7-8 inches in longest diameter. Recovery rapid and perfect.

Dr. McCleur's case of lithotomy. Boy, age 13 years. Stone removed by median operation. Two calculi weighing near two ounces. Patient recovered slowly, a fistulous opening remaining nearly three months. Final complete recovery.

Dr. McCleur's case of ovarian hernia. Patient, married, age 38. Sterile tumor removed by incision and ligation of pedicle. Rapid and complete recovery with relief of suffering.

Reported in American Journal Obsts. Vol. 6-P. 613.

Dr. Horr's case of foreign body in larynx. A small burr lodged and held fast by its spines half inch below vocal cords. Removed by forceps with the aid of laryngoscope. Recovery complete.

Floyd County.

Prior to 1875 no medical society had been formed in this county. Sept. 22, 1871, a district society, known as the Upper Cedar Valley Medical Association was formed, including Floyd, Butler, Cerro Gordo, Mitchell, Howard and Chickasaw counties. Meetings held semi-annually. Present membership (1875), 20. President, Dr. S. Troy. Secretary, Dr. Fitch.

Pioneer Physicians.

Dr. J. W. Smith was born in Franklin, New York. Graduated from the Medical Department of the Yale College in 1856. Located in Charles City, March 1857, where he still resides (1875), engaged in active service with his son. Dr. Smith is the oldest graduated physician in the county.

Drs. Parsons, McEven, Reiddle and Burney are also among the pioneer physicians in this county.

Intermittent and typho-malarial fever prevailed endemically some seasons. As the soil becomes cultivated, intermittent diseases become less common. An epidemic of dysentary prevailed in this county in 1873 which proved quite fatal among children. Diphtheria appeared in 1859 and has prevailed to some extent since. Cerebro spinal meningitis has prevailed as an epidemic several times, quite extensively in 1873.

The number of physicians practicing in Floyd county (1875) is 16, of which 14 have diplomas and 2 have no diplomas. Regulars, 13; Homeopaths, 2; Eclectics, 1.

Among the surgical operations performed in Floyd county are the following by Dr. Smith. (No record of other operations could be obtained.) D. S. F.

Three operations for strangulated hernia; one inguinal and two

femoral. The case of inguinal and one femoral recovered, the other proved fatal.

In May 1872, Dr. Smith removed a fibroid tumor of the uterus by "Gastrotomy" including the uterus which weighed 15 lbs. "This operation was not advised but was done at the urgent solicitation of the suffering but heroic woman, aged 32. Death occurred on the sixth day."

Dr. Smith operated for vesico-vaginal fistula—successful. Date not given.

In 1875, Lithotomy; boy age 13 years, Lateral operation. Size of stone, 2x1 1-2 inches. Successful.

In 1875, operated for complete rupture of perineum; loss of two inches of recto-vaginal septum. Successful.

Laryngotomy for foreign body. Recovery.

Handbook of Suggestive Therapeutics-Applied Hypnotism-Psychic Science.

A Manual of Psychotherapy. Designed especially for the General Practitioner of Medicine and Surgery.

By Henry S. Munro, M. D., Omaha, Neb. Third Edition. Revised and Enlarged. St. Louis, Mo.—C. V. Mosby. 1911. Price \$4.00.

Dr. Munro has written a book on a very interesting subject which will appeal to a large body of medical readers. To the medical critic some serious defects will appear. In the first place, too much space is devoted to psychological speculations and too many pages to bemoaning the ignorance of the profession on the subject of psychotherapeutics, and of the stupidity or prejudice of doctors in failing to avail themselves of the advantages of this method of treatment; we do not feel that argument is convincing. Dr. Munro is apparently well trained in this field of therapeutics and is no doubt a close observer. We feel that he and his associates in suggestive therapeutics make a mistake in attempting to establish border line relations between the practitioner of medicine and the charlatan. The practical man of medicine and surgery trained in associations of the body with pathological changes, knows the influence of suggestions on the feelings of his patients and is governed by the knowledge in determining his course of action. He often finds that through suggestion, patients have come to believe that they have diseases which require the attention of the physician or even the surgeon and are willing to submit to dangerous operations for relief from diseases which do not exist. Through suggestions also these patients may be relieved of their supposed diseases. It is here that an immense responsibility rests upon the physician, not by the use of strange and mysterious means of cure but through well directed advice properly regulating the patient's conduct.

We meet with a great number of people who have suffered

from injuries of greater or less severity at the hands of responsible persons or through the alleged negligence of corporations. Almost immediately a train of suggestions follow which are liable to continue until a settlement is effected when the remarkable train of symptoms following perhaps a comparatively slight injury rapidly disappear, simply through withdrawal of suggestions incident to the necessary consultations of lawyers and doctors for court purposes. In the past we have charged these persons often unfairly with deliberate fraud. The recovery from the distressing nervous symptoms was not through suggestion but through the withdrawal of suggestion and the return of the patient to a more normal mode of life. The strenuous life of the present day is probably responsible for many cases of neurasthenia especially among those poorly equipped for the struggle, also the unfortunate and disappointed. It is difficult to understand how these people can be restored to the normal except through a change in the conditions. There is no doubt advantage in the employment of suggestion in getting away from morbid ideas with which some of these people are possessed. Dr. Munro has very clearly pointed out the advantage of suggestion in the treatment of acute disease in the way of inspiring hope and cheerfulness in the struggle and no doubt many lives could be saved by a careful consideration of the influence of hope producing suggestion. Many physicians have gained much reputation from the saying that the "Doctors presence in the sick room was better than all the medicine" which is no doubt true. There is a class of nervous cases which suggestion does not appear to reach unless it is accompanied with all the pretence and circumstance of the charlatan. These patients are cured over and over again by succeeding charlatans. As the value of the Freud method of treatment of patients whose obsessions are on the border line of insanity, we are not at the present time able to entertain an opinion.

The practice of medicine is so complex and there are so many influences surrounding patients and so many motives governing practitioners that a work like Dr. Munro's dealing with ethical and sociological questions is opportune and notwithstanding its faults it is cordially recommended to the profession for the many valuable suggestions it contains.

Society News.

Story County Society will meet in Ames, Nov. 7.

Essay Ben G. Budge, Ames
Cases in practice E. E. White, Huxley
Essay P. Jorr, Maxwell

Osteomalacia—Report of a case, illustrated with photographs, showing both arms, sternum and cervical vertebra broken by patient moving in bed.

The thirty-seventh annual meeting of the South Eastern Iowa District Society will be held in Washington, Nov. 16, 1911. A good time—socially and scientifically—is promised. The preliminary program follows:—

Open Air Treatment of Tuberculosis.....H. E. Kirschner, Oakdale, Iowa
 The Three Essentials for Healthful Human Life.....
J. Fred Clarke, Fairfield, Iowa
 Glandular Fever.....J. H. Chittum, Wapello, Iowa
 Practical Physiology.....J. F. Herrick, Ottumwa, Iowa
 Tincture of Iodine as the First Dressing..H. A. Leipziger, Burlington, Iowa
 Drug Therapy.....S. K. Davis, Libertyville, Iowa
 Report of a Case of Torsion of Omentum..S. A. Spillman, Ottumwa, Iowa
 Chloroform and Ether.....J. W. Pence, Columbus Junction, Iowa
 Typhoid Vaccination.....J. S. Gaumer, Fairfield, Iowa
 President's Address—Hospitals.....C. A. Boice, Washington, Iowa

The Second District Society met in Davenport, Oct. 10, with the following program:—

1. Pupillary Manifestations, for the General Practitioner.—W. E. Keith, Clinton.
 2. Vaccine Therapy.—H. M. Decker, Davenport.
 3. Diagnosis in Obstetrics.—H. R. Reynolds, Clinton.
 4. Vomiting of Pregnancy.—E. B. Henderson, Marengo.
 5. The Treatment of Pneumonia.—C. P. Howard, Iowa City.
 6. Otitis Media.—F. E. V. Shore, Des Moines.
 7. Sanitary Regulations.—F. V. Johnson, Maquoketa.
 8. The Treatment of Puerperal Septicemia.—L. W. Littig, Davenport.
 9. Food Hygiene.—C. Van Epps, Iowa City.
 10. The Diagnosis and Treatment of Acute Poliomyelitis in the Light of Recent Investigations.—D'Orsay Hecht, Chicago.
 11. Rest, as an Adjuvant to Therapy.—E. A. Hanske, Bellevue.
 12. Pyloric Stenosis in Infancy.—H. M. Richter, Chicago.
- This Society is well attended.

The Poweshiek County Society meets at Malcom, Iowa, Oct. 10th, with the following program:—

Hysteria.....E. E. Harris
 Exophthalmic Goitre.....E. J. Ringena
 The Treatment of Abortion.....Delano Wilcox

DECEMBER 5.

Our Relations to the Irregular.....E. B. Williams
 History of Medical Ethics.....I. N. Busby
 Review of the Year with a Few Suggestions.....O. F. Parish
 Election of Officers.
 Banquet.

Louisa County Society met in Wapello, the second Thursday in October.

Webster county has one of the most active and progressive societies in the state. It meets weekly and experiences no difficulty in having good meetings. The program for October and November is as follows:—

- Oct. 3—Influence of Nose and Throat Diseases on the Digestive Tract—
C. H. Mulroney.
Oct. 10—Auto-intoxication—J. M. Garrett.
Oct. 17—Examination of the Abdomen; Methods; General Diagnosis—
J. F. Studebaker.
Oct. 24—Significance of Abdominal Pain—Robt. Evans.
Oct. 31—Abdominal Tumor; Diagnosis—C. J. Saunders.
Nov. 7—Diagnosis of Stomach Disease—A. E. Acher.
Nov. 14—Therapeutics of Stomach—C. O. Epley.
Nov. 21—Surgery of Stomach—W. W. Bowen.
Nov. 28—Gastroptosis—F. E. Seymour.

Fremont County Society met in Thurman, Oct. 4.

PROGRAM.

1. Paper—"Some Observations made at the Los Angeles meeting"—
W. C. Johnson, Thurman.
2. Paper—"The Treatment of some of the more common diseases of the
Eye."—S. C. McKittrick, Tabor.
Discussion—Led by C. E. Hoover, Hamburg.
3. Paper—"Manifestations and Treatment of Typhoid Fever in Children"
—Frank C. Neff, Kansas City, Mo.
Discussion—Led by T. C. Cole, Thurman.
4. Subject for general discussion—"Post-Partum Hemorrhage," led by
A. E. Nelson, Sidney.

Polk County Society met in the Savery, Oct. 3, with this program:—
Carcinoma of the Uterus.....H. A. Minassian
Treatment of Eclampsia.....A. C. Page

PROGRAM.

Monroe County Association, Albia, September 19.
Pneumonia.....Fred Stafford, Lovilla
Rheumatism.....Merle Bone, Avery
Some of Our Mistakes.....M. F. Riordan, Melrose
Ear, Eye, Nose and Throat Subject.....D. E. Graham, Ottumwa
Gastric and Urine Examination.....P. G. Young, Hocking
Treatment of Skull Injuries.....C. B. Powell, Albia
Discussions.

Humboldt County Society met in Bode, Sept. 19, with this program:—
Cholera Infantum.....Wm. Shipley
Nasal Catarrh.....J. J. Bowes
Auto Intoxication.....E. L. Watson

The Polk County Society, thro' Secretary Duhigg sends in a splendid report. It now has a membership of 151, a gain of 42 over last year. There are 44 others in the county who may be considered reputable practitioners. Thirty men, with medical titles, tell the dear public thro' the newspapers what they can do for their ills. Fifteen osteopaths hold aloft the beacon light of that sect

The Van Buren County Society met Sept. 21, in Keosauqua. The topic—Non-Inflammatory Diseases of Uterus and Appendages. Papers were presented by W. H. Mott of Farmington, C. R. Russell of Keosauqua, Z. E. Morris of Stockport and R. N. Cresap of Bonaparte.

This society meets quarterly and has conducted post graduate studies during the past year.

Cass County Society met at the hospital in Atlantic, Sept. 12.

PROGRAM.

Two Cases of Puerperal Eclampsia.....H. E. Campbell
The X-Ray.....A. Weaver
Abdominal Adhesions.....May Emmert

Wapello County Society,

PROGRAM.

OCTOBER 17.

Tuberculosis of Bone.....W. B. La Force
Acute Tonsillitis.....D. E. Graham

NOVEMBER 7.

Tuberculosis of Bones and Joints.....J. A. Hull
Chronic Tonsillitis.....D. B. La Force
Bovine Tuberculosis in Human.....F. C. Mehler

NOVEMBER 21.

Vertebral Spondylitis (non-tubercular).....W. C. Newell
Embryology.....J. F. Herrick

The printed program goes into detail with all these topics and ensures a complete presentation of the subject.

The officers of the Drake Medical Alumni Association have sent letters to the alumni announcing that there will be held in Des Moines next spring a two days' clinic, for their benefit. The program will consist of demonstrations in medicine, surgery and laboratory work, conducted by the professors and alumni of the University. The evenings will be devoted to round table discussions of the work preformed during the day and social functions. And as the letter stated there will be something doing every minute.

The clinic has become recognized as the place where most valuable knowledge may be acquired in the least possible time. It permits the physician who is unable to leave his practice any length of time to come in touch with clinical advantages for at least a few days.

Every means will be provided by the committee to make the home gathering alumni one of inspiration and true worth and give them a glimpse of the rapid strides the University is taking.

Dr. E. B. Mountain, Sec'y.

Ringgold County Society met Sept. 20, at Mt. Ayr.

PROGRAM.

Modern Medicine.....	E. J. Watson, Knowlton
Who's to Blame.....	J. H. Goad, Ellston
Paper.....	G. M. Carlisle, Diagonal
Needed Legislation.....	L. F. Talley, Diagonal
Hard Work.....	C. M. Walker, Kellerton

Each doctor attending was asked to bring at least one clinical case to present to the society.

The attending members and visitors were entertained by the society at luncheon at the Mount Ayr House at high twelve.

Visiting ladies were received at the parlors of the Mount Ayr House all day.

John B. Murphy, M. D.—The right to conduct animal researches is fought for by medical men almost single-handed. The contest for a national department of health for the prevention of disease has been made in the main by medical men. The struggle for health legislation is made mostly by medical men. Can any one doubt the sincerity of the medical profession in these struggles when their accomplishment means a great reduction in its revenue? The efforts of the general public and the profession should be cooperative, never antagonistic, to obtain the best results.

What is the character of the people in opposition to this work and what is the character of the natural force which is more deadly than opposition?

The opponents are illy-balanced sentimentalists—people with limited capacity for estimating educational or health factors—people without capacity for perspective (such as the antivivisectionists and antivaccinationists), and people with less intellect or integrity than any of these; by half-way medical men, as osteopaths, chiropractors, etc.; by people with theoretic creeds whose basic belief is against the physician in its sorry attitude, such as a minority of Christian Scientists; by the suppressed patent and proprietary medicine venders of worthless or dangerous drugs; by a group of men who have suffered financial loss through growing demand made and fostered by this organization, that advertisements in newspapers, magazines, proprietary and "patent-medicine" pseudo-medical journals, shall not lie; by those whose often criminal and always fake practices have been destroyed by exposure through the medical profession; and lastly by a group of erstwhile convicted criminals thirsty for revenge, now of quasi-respectability, affluence and power, whose past reeks with obscenity, vulgarity, immorality of crime.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

D. S. FAIRCHILD, M. D.....Clinton
EDITOR
C. A. BOICE, M. D.....Washington
ASSOCIATE EDITOR

Vol. 1 Clinton, November 15, 1911. No. 5

Address of Chairman

J. C. ROCKAFELLOW, M. D., Des Moines.

SECTION OF SURGERY.*

Mr. President and Members of the Iowa State Medical Society:—

It has been the custom in making the annual report before this section to cover in a general way the progress made in surgery during the preceeding year, or the advances made in one particular field of surgery. While this always furnishes ample material for such a report, it in a way encroaches upon the various subjects of the contributors to the surgical program. In endeavoring to avoid this, and being prompted by the records of several cases, I have elected to report upon “The conditions existing in the newborn that require immediate surgical intervention.”

The subject is not chosen because of its novelty, nor by reason of anything new that I might be able to present, but rather from the fact that this class of cases is grossly neglected. To those of you who do general practice the subject should be of great importance, and through you, who first encounter these cases, must come the relief which surgery offers.

In a brief article embodying so many different conditions it will be impossible to deal in detail with any of them and they must consequently be considered in a general way.

The most common conditions demanding operation at birth are some of the congenial deformities, and of these, the deformities of the gastrointestinal tract are most often met with. These may be classed as follows: hare lip, tongue tie, sublingual cysts, congenital obliteration of the intestine and imperforate rectum.

Hare lip, one of the commonest deformities, may or may not require immediate attention; the advisability of operation depending

*Read in Section on Surgery, Iowa State Medical Society, May, 1911, Sixtieth Session.

on the ability of the child to nurse and upon its physical condition. In a case in which the labial cleft is not sufficiently developed to interfere with nursing, operation had better be deferred until some weeks after birth. Cases where nursing is interfered with, and this cannot be overcome by use of the breast shield, should be subjected to immediate repair provided the infant is strong, but if not it should be fed by a spoon until its physical condition will warrant an operation. In cases of hare-lip associated with cleft palate it is well to bear in mind that a repair of the lip will favorably influence the cleft in the palate, and render a subsequent operation on the palate much easier.

Tongue tie, or lack of development of the frenum, is a deformity often encountered, and it is a question whether the condition in itself demands treatment or not. Many of the cases if left alone will develop after birth, but the majority of them will require attention as much on account of the solicitude of the parents as for the condition itself. The treatment is simple and consists of snipping the frenum at its attachment to the floor of the mouth, but all cases so treated do not develop a freely movable tongue and this should be considered in giving a prognosis, the result really depending on subsequent development rather than on any form of treatment.

Sublingual cyst, or what is known in later life as a ranula, is one of the unusual conditions found in the newborn. When it exists, its size determines whether immediate treatment is necessary or not; its mechanical interference with nursing alone being harmful. Contrary to similar treatment in the adult these cases yield to a simple puncture and the great number of them do not refill. However should they do so after several tapplings, the operative treatment for ranula should be instituted.

Congenital obliteration of any portion of the gastrointestinal tract is fortunately one of the rarest deformities. The obstruction may occur in any location from the pharynx to the lower sigmoid. When located in the pharynx or esophagus it is developmental in origin, but when occurring in the abdomen it is usually caused by fibrous bands constricting the intestine, and due primarily to intra-uterine peritonitis.

It was my privilege sometime ago to observe a case of this kind, and while the true condition was not diagnosed during the life of the infant, the symptoms were such that it should have been suspected. The constriction was in the duodenum and the symptoms were those of chronic obstruction rather than acute. The child had intractable vomiting, flat abdomen, severe colic, malnutrition, constipation alternating with fluid diarrhoea and died in the course of a few weeks. Should obstruction occur lower down in the intestinal tract and be complete, it is fair to assume that such a

case would present the classical symptoms of acute intestinal obstruction, and the treatment could hardly be different than for a similar condition in an adult, viz., opening the abdomen and relieving the constriction.

Imperforate rectum is a deformity more frequently met with and occurs in one of two forms, either as a transverse septum in the lower part of the rectum, or a complete obliteration of a part of the gut. The presence of this condition is not difficult to diagnose, however the extent of the deformity is. A failure of the child's bowels to move during the first few hours of life arouses suspicion and a digital examination of the parts reveals the true condition. In cases having only a septum there is a bulging of the same when the child cries. This class of cases is easily remedied, requiring but a crucial incision of the septum with subsequent occasional dilatation.

Where a considerable part or all of the rectum is obliterated the case becomes one of grave concern, as we have no way before operation of telling the extent of the obliteration, and it is a question of what operative course to pursue. A dissection of the perineum with the idea of searching for the lower end of the gut has been advocated by some authorities and has resulted in the successful performance of Kraske's operation or some of its modifications. On account of the small size of an infants perineum and the fact that the bladder in this deformity extends further toward the hollow of the sacrum, this operation becomes a very difficult one. One thing is plainly indicated in these cases, and that is to relieve the fecal accumulation. This can be done by an inguinal colostomy and at the same time a combined abdominal and perineal method instituted to establish the continuity of the bowel, rather than resort to an operation which leaves at the best a permanent fecal fistula.

The only congenial deformity of the genito-urinary tract that may require immediate operation is that of imperforate urethra. This condition is always associated with some degree of hypospadias, and like imperforate rectum occurs in one of two forms, either as a septum in the glandular part of the urethra or an obliteration of a portion of the canal. The same difficulties arise in diagnosing the extent of the deformity and the treatment must be carried out along the same surgical lines. Cases where only a septum exists require but a puncture to connect the two portions of the urethra. This may be tried in all cases but in the event of failing to establish the urinary flow, more radical measures must be adopted.

Suprapubic puncture has been advocated as well as puncture of the urethra posterior to the obliterated portion. The first procedure leaves a permanent urinary fistula, the second deals with an unknown quantity, as the extent of the obliteration cannot be foretold.

Consequently it is better in these cases, provided the child is strong, to do a suprapubic cystotomy and perform retrograde catheterization; definitely locating the obstruction and if possible establishing a continuous urethra. I have employed this method in the newborn with such satisfactory results that I would be loath to resort to suprapubic puncture or to search for the urethra posteriorly.

Hernia when present at the time of birth is a congenital defect that may or may not require operation. Here it becomes a matter of condition of the hernia rather than the form. A complete umbilical hernia usually closes under the simple forms of treatment, but the incomplete or exomphalic form, that where the protruding viscera are not covered by skin, constitutes a condition that, if not repaired, is incompatible with life. In the past the majority of these cases have been allowed to die without the possible benefit of operation, but the reports on those operated upon have been too favorable to permit of treatment other than that of a plastic operation that closes the opening in the umbilical region.

Irreducible inguinal hernia demands the same treatment in the new born as in the adult. These cases should be operated on at once, and it is not wise to stop at a simple herniotomy as a few added stitches properly placed will effect a permanent cure. Infants stand this operation remarkably well and the end results are equally as good as in the same operation on the adult.

Many of the cases diagnosed an irreducible inguinal are in reality encysted hydroceles of the cord. Where one is positive of the diagnosis, the sac can be aspirated and will in all probability not refill. But if there be an uncertainty in diagnosis, it is better to do an operation, remove the sac and narrow the inguinal canal, as all encysted hydroceles of the cord dilate the canal and predispose to the development of hernia.

Spina bifida, a deformity due to the absence of the spinous processes of the vertebrae, fortunately for the infant as well as the surgeon, seldom requires treatment at the time of birth. This class of cases is accompanied by an enormous mortality when operated on any time during infancy. Cases where the coverings of the sac are deficient and the contents of the spinal canal are exposed, theoretically might be benefitted by operation; but these babies are stillborn or at the best live but a few hours. However there is one condition that must here be considered and that is where a complete sac ruptures during labor. A number of such cases have been reported and in such an emergency one would be justified in attempting a surgical cure as the case otherwise would promptly prove fatal.

A class of cases that offers more hope of recovery, but which until the last few years has been neglected, is that of injury to the brain or its membranes during labor. Of these injuries the one that

interests us from an operative standpoint, is that of intracranial hemorrhage. The condition has been recognized for years, but not until recommended by Keen in 1901 has operative treatment for the same been seriously considered. It remained for Cushing, four years later, to publish the first literature on the subject, embracing the diagnosis, prognosis and technic.

From several series of autopsies it has been found that the hemorrhage was usually cortical; that it most often occurred over the motor area of the brain and was due to rupture of the venous radicles that empty into the superior longitudinal sinus. The cause of rupture being due to extensive overlapping of the parietal bones during labor, the faulty application of forceps or violent extraction of the aftercoming head.

A careful study of the symptomatology has been made by Seitz and he finds that most all cases follow a protracted labor with instrumental delivery; that the child is cyanotic but soon improves in color under proper care. On account of its nonmedullated state, the brain is very tolerant of pressure, and the characteristic symptoms do not develop until quite an extensive hemorrhage has taken place, which may be a matter of some hours after birth. These are at first irritative in character. The child is restless, fretful and unable or disinclined to nurse. No sucking reflex is manifested when a finger is inserted into its mouth. The fontanelle become tense and may cease to pulsate. The pulse is slow, respiration irregular and blood pressure is increased. Cushing lays stress on a dilatation of the veins over the skull, the eyelids and in the optic discs. Deveraigne has demonstrated the importance of lumbar puncture from a diagnostic standpoint. Motor symptoms develop later and may be bilateral, as hemorrhage oft times occurs in each hemisphere.

The treatment of intracranial hemorrhage in the newborn is carried out along the same surgical lines as in the adult. An osteoplastic flap, cut with a pair of heavy curved scissors is turned down, the clot gently removed, the hemorrhage controlled, the dura sutured and the wound closed without drainage.

The results of operative treatment are far better than those of non-operative. Seitz reports a mortality of over 85 per cent. in non-operative cases with the surviving few mentally impaired, paralysed, or both. The mortality following operation is less than 65 per cent., and in operative cases the recoveries have been complete.

The conclusions drawn from this statement are applicable to many of the conditions requiring operation at birth. It is a question not alone of saving the life of the child, but of rendering it as near perfect in mind and body as possible, in order that it may be better able to cope with the forces that it will naturally encounter during a strenuous life.

DRAINAGE OF THE LYMPH CHANNELS FROM THE MAMMARY GLAND AND THE SURGICAL RELATIONS OF THE AXILLA AND SUPRACLAVICULAR REGION.*

H. J. PRENTISS, M. D., Iowa City, Iowa.
(Professor of Anatomy at the State University.)

The mammary gland is a special cutaneous development and belongs in the same category as the sweat and sebaceous glands. Its lymph supply, therefore, is a modification of the dermal lymph channels. The lymphatics of the skin are divided into two networks; first, a superficial plexus, located in the papillary layer of the corium, and a deeper, more loosely meshed plexus located in the deeper widely meshed connective tissues of the corium.

Into this deeper plexus empties the superficial plexus and from which the collecting trunks run in the subcutaneous tissue to their terminal lymph nodes. These collecting lymph trunks as a rule accompany the cutaneous veins.

Since the mammary gland is developed by a rapid proliferation of the cutaneous epithelium along the milk ridge into the subcutaneous tissue, we may say the course deep plexus of lymphatics accompanies these down pushings. (Because of the nature of this development the mammary gland has no true capsule) As the result of this development we find outside of the glandular acini large perilobular lymph sinuses forming a plexus whose conducting channels parallel the galactophorous ducts, and empty into the deep cutaneous plexus beneath the areola around the nipple and known as the subareolar plexus. This sub-areolar plexus is emphasized from the surrounding cutaneous plexus because it is reinforced by the collecting ducts from the mammary gland, lymphatic plexus.

The collecting lymphatic channels from the subareolar plexus arise as follows; one from its medial aspect, the other from its lateral aspect. The medial trunk runs towards the axilla skirting around the lower aspect of the subareolar plexus. It empties into the pectoral chain of lymph nodes on the lateral aspect of the pectoralis minor and beneath the pectoralis major at its point of leaving the chest wall, anywhere between the fourth and fifth ribs along the anterior axillary. Into this trunk empty one or two collecting trunks from the inferior mammary cutaneous plexus.

The lateral trunk passes directly to the pectoral lymph chain. It receives a collecting lymph channel from the superior cutaneous of the mammary gland.

The mammary gland sends mammary tongue around the lateral border of the pectoralis major where it leaves the chest wall at the

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anterior axillary border at the level of the fifth rib. Therefore, the pectoral lymph chain does not extend lower than the fourth rib.

This is the main course of the lymphatics of the mammary gland. There are accessory collecting lymph channels, however, which probably belong to the general cutaneous lymph plexus. From the medial aspect of the gland collecting lymph trunks accompany the perforating branches of the internal mammary vessels and empty into the mediastinal lymph nodes along the internal mammary artery. Poirle calls attention that, through these lymph channels are a fact, they probably atrophy in senile manner, in which, as we know, carcinoma is apt to develop.

A crossed anastomosis may occur carrying the lymph to the opposite gland and even to the opposite axillary lymph nodes. Similarly a connection may occur between the mammary lymph plexus and the inguinal lymph nodes through the collecting lymph trunks following the cutaneous thoracico-epigastric veins. Again, a collecting lymph trunk may follow the cutaneous veins over the clavicle and end in the lymph nodes at the root of the neck.

Grossman injected three times in thirty subjects a trunk which left the posterior surface of the mamma, perforated the pectoralis major, and accompanied the pectoral branch of the acromio-thoracic between the pectoralis major and minor to finally empty into the subclavian division of the axillary chain of lymph nodes.

It is well to bear in mind that the lymphatic system is a secondary absorption system developmentally. In early embryos the venous blood vessels have this function, there being no lymphatics. In the adult, therefore, the lymphatic system does not tend to invade those tissues where the blood supply is particularly abundant. This is true of the muscle tissue. The lymphatics are found in the con-

Though asked to discuss the mammary lymphatics perhaps I am neglective tissue passing between the muscle bundles.

justified in discussing the axillary lymphnode chains, as to position, means of locating same, and structures to avoid.

Situated along the thoracic side of the great vascular sheath which contains the axillary vein, axillary artery, and great trunks of the brachial plexus, is a chain of about fifteen lymph nodes, rather arbitrarily divided into a brachial group, central group, and subclavian group. The brachial group situated lateral to the pectoralis minor, receives most of the channels from the upper extremity and empties into the central group. The brachial group also receives the efferent channels of the subscapular group which drains the posterior aspect of the thorax. The central group is placed behind the pectoralis minor. It receives the efferent channels from the brachial group and from the pectoral lymph node chain. The subclavian group is placed medial to the pectoralis minor and receives the efferent channels from all other lymph node groups. Its

effluent duct passes to the thoracic duct on the left side, or to the great right lymph duct, both of which empty into the venous system.

Though the anastomosis between the collecting lymph trunks is not great as in the case in the venous and the arterial system, yet an anastomosis can occur between the pectoral and subscapular of lymph nodes.

The subscapular group of lymph nodes is placed along the course of the subscapular artery. The pectoral lymph group is placed along the course of the external mammary artery.

To locate the subscapular group. On the scapular wall of the axilla feel for the sulcus between the latissimus dorsi and teres major laterally and the subscapularis medially. By deep pressure we can feel the groove in the axillary edge of the scapula bone. Medial to this and running on top of the axillary edge of the subscapular muscle are located the subscapular artery, the subscapular vein or veins, the long subscapular nerve, and the scapular lymph nodes. The long subscapular nerve is the structure to be isolated, which is necessary as it supplies the latissimus dorsi muscle. The lower or short subscapular nerve which supplies the teres major, parallels the axillary vein, and can be readily recognized.

The pectoral group accompanies the external mammary artery. This artery arises from the axillary, dorsal to the pectoralis minor near its origin from the coracoid process, passes down beneath the pectoralis minor and approaching its lateral edge. This lateral edge terminates in the fifth rib where the lateral edge of the pectoralis major leaves the chest wall. At this point, therefore, the external mammary artery passes around to the mammary gland. Knowing the position of the coracoid process and course of the lateral edge of the pectoralis major to the lateral edge of the latissimus dorsi.

The thoracic side of the axilla presents the external respiratory nerve of Bell which supplies the serratus magnus muscle. This nerve is found closely applied to the serratus magnus just posterior to the mid axillary line.

In exposing the supraclavicular glands it is necessary to consider the anatomy of the subclavian triangle. The subclavian triangle is bounded above by the omo-hyoid muscle, below by the clavicle, and medially by the lateral edge of the sterno-cleido mastoid muscle, and also the lateral edge of the scalenus muscle, which edge is placed posterior to the lateral edge of the sterno-cleido mastoid at the root of the neck. The scalenus anticus is of great importance because at its medial aspect the internal jugular joins the subclavian to form the innominate vein. On the left side the thoracic duct, which usually joins at the angle formed by the internal jugular and subclavian, is placed medial to the scalenus anticus and therefore behind the clavicular head of the sternocleido mastoid. To expose the lymph nodes in this subclavian triangle we can make

an incision along the lateral edge of the sterno-cleido mastoid down to its insertion into the clavicle, and laterally along the upper level of the clavicle. This incision can be carried through the skin, superficial layer of the superficial fascia, and the deep layer of the superficial fascia in which are found the fibres of the platysma myoideus muscle. We then come to the deep cervical fascia. The deep cervical fascia in this region presents two layers, the more superficial or vaginal fascia, which encircles the neck, splitting to enclose the sterno-cleido mastoid and trapezius muscles; and the deeper layer, which is called the muscle fascia, and includes between its layers the depressors of the hyoid bone. Its lateral limit therefore, is the omo-hyoid muscle.

Cutting through these layers we come immediately upon the great venous channels; namely, the termination of the external jugular, the transversalis colli, and possibly the suprascapular. It is in this region that we find the supraclavicular lymph nodes which are to be removed.

Behind this region we find the lateral extension of the prevertebral fascia. This fascia includes between its layers the scalenus anticus muscle. It jumps across the interval between the scalenus anticus and medius muscles and includes the lateral muscles of the neck. Behind it is found the third portion of the subclavian artery in the interval between the scalenus anticus and medium muscles, and the great trunks of the brachial plexus. Bearing this in mind no injury should occur to these structures.

TREATMENT OF THE CANCER OF THE BREAST*

L. W. LITTIG, A. M., M. D. M. R. C. S., Davenport, Iowa.

That the treatment of cancer of the breast may give the best possible result, an early diagnosis, a correct conception of the manner in which cancer cells are disseminated, and a properly planned and efficiently performed operation are absolutely essential.

The importance of early operations is becoming more and more understood by the public, breast tumors are often seen before the characteristic signs are evident, and when a positive diagnosis without incision or microscopic examination is not possible in more than seventy-five per cent of the cases. In regard to frequency, eighty five per cent of all tumors of the breast are said to be cancer, or will become so, and from ninety to ninety-five per cent are malignant. The cancer age is from nineteen to eighty, although it occurs with considerable frequency in the twenties, and one case has been reported at the age of sixteen. It occurs with greatest frequency at or

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just after the menopause, or at the time when the epithelial elements of the gland are apt to proliferate unduly, and functional decline is taking place. Indeed, so frequently does cancer appear in the breast at this age, that there would be few errors if every tumor in the female breast, at and after this period be diagnosed and treated as cancer.

The tumor is found most frequently in the outer half of the gland, and again most frequently in the upper and outer quadrant. Next in frequency, just beneath the areola, where it pulls on and retracts the nipple.

Cancers appearing in the inner half of the breast, while less frequent, give a less favorable prognosis than those in the other half.

Hurried and incomplete examinations are to be condemned. Both breasts must be bared, and Halsted tells us that an hour may sometimes be profitably spent in examining some cases.

A tumor which grows at the expense of the breast, and which does not add to the volume of the breast, is very suspicious. A tumor which shortens the quadrant of the breast in which it is located is cancer. Any tumor of the breast which retracts the nipple, or which is more or less immovable, is almost surely cancer. Rodman and Halsted lay much stress on one point, the dimpling of the skin. Both breasts must be bared, examined at the same time, and must be freely moved in every possible direction, and any pulling of the trabeculae which produces asymetry, or dimpling of the skin, is of immense diagnostic importance. An almost imperceptible suggestion of a pull and dimpling is sufficient for a diagnosis.

Pinching of the skin over the tumor is quite sure to produce shortening of the trabeculae and dimpling, or dimpling may be due to atrophy of the superficial fat over the tumor. The fine multiple dimpling of the skin over a breast tumor, to which the term orange skin (*peau d'orange*) has been applied, is a symptom of much value, and if well marked is said to be pathognomonic of cancer.

Retraction of the nipple is present in over half of the cases, and is a symptom of very great value. A discharge from the nipple is suggestive, but not conclusive. A scanty, thin, bloody discharge is strong evidence of cancer, while a mucoid discharge points to a benign growth. A discharge of blood, or a quite bloody fluid, suggests an intracystic papilloma.

That all cysts must be carefully scrutinized is evident from the report of Taylor, who found thirteen of twenty-six breast cysts to be cancerous. Cysts containing a clear fluid, and thin walls are very often malignant.

Halsted tells us that a scarcely discernible change in the cyst wall, a small nodule at one point, a scarcely perceptible thickening, a slight lack of luster, the faintest difference in color and texture must carefully be noted, and point to cancer. A smooth walled cyst,

containing blood, without a papilloma, also a cyst containing granular or grumous contents, is a cancer. If the cyst contain a fungoid mass, and if the contents be grumous, or hemorrhagic, it is cancer. If the strawberry or raspberry shape of the papilloma be preserved, and the contents be hemorrhagic, it is benign. Blood in a smooth walled cyst without a papilloma means a cancer. The contents of a benign cyst are always clear or very slightly cloudy, never hemorrhagic, granulated or grumous, the cyst wall is always thin. A cyst containing a fungus mass, like a medullary cancer, is malignant. In all benign papilloma cysts, the contents are clear or hemorrhagic, never grumous or granular, and the typical raspberry or strawberry appearance of the papilloma is preserved.

Gentle palpation gives some information. A benign growth is more or less soft, circumscribed, encapsulated, and movable. A malignant growth is irregular, not encapsulated, infiltrating, and more or less immovable, unless very early when even a scirrhus may be freely movable. If in doubt as to the diagnosis, cut into the growth with a strong sweep of the knife. If cancer, a sponge saturated with Harrington's solution should at once be pressed into the wound, to seal the lymphatics and to prevent the spreading of cancer cells. The ideal procedure in doubtful cases, is the immediate microscopic examination of a part of the tumor, by a competent pathologist. I repeat the word "competent." An incompetent pathologist is a treacherous staff, and to be avoided.

It need scarcely be said the radical operation must immediately follow the exploratory incision, the wound surface must be sealed, and the operation continued. To postpone the operation for some days, until a report can be received from a distant pathological laboratory, is a proceeding to be condemned. An exploratory puncture is not justifiable, it may spread cancer cells, and does not give positive results, although Reclus believed that an exploratory puncture is a most valuable aid to diagnosis, and prided himself that by its introduction he had saved hundreds and perhaps thousands of breasts from the knife.

It would be a waste of time to make a plea for early operation. We all agree with Richardson who said that "every breast tumor demands an operation, not next year, not next month, not next week, but today."

Sometime ago a leading Chicago surgeon, in discussing the importance of early operation, told of a patient whom he had seen the day before, in a distant town. The case was inoperable, the delay being due to the advice of the family physician, to postpone the operation until cooler weather. I asked, "Doctor, in a case of that kind, what do you say to the members of the family to make them feel that the best possible has been done, what do you tell them, and what do you tell the doctor?" "The doctor, I tell him to go to

the devil, I don't want anything to do with such a fellow, put off a cancer operation until cooler weather!" I agree with the doctor, the devil is the only fitting company for this type of procrastinator.

A proper conception of the operation for cancer of the breast must be based on the manner on which cancer cells are disseminated, and in the solution of this problem the study of recurrences and of the lymphatic distribution gives most valuable aid, but it must be based on the following principles and involve "A complete removal of the diseased organ, as much of the surrounding tissue as possible, together with the removal of the regional lymphatic glands which drain the part affected."

What route is travelled between the breast and distant organs later infected?

The lymphatics of the breast have been said to drain into a subareolar lymphatic plexus, and from this plexus, the lymph is conveyed by large channels to the lymphatic glands of the axilla. Cancer cells may find their way into these channels, and be swept to the lymphatic glands of the axilla by an embolic process. Thus the axillary glands are early involved.

The axillary glands drain a lymphatic area extending from the clavicle above to the umbilicus below, and from the median line to the latissimus dorsi behind. This great lymphatic plexus lies just above the deep fascia, the lymph current being toward the axillary glands. The connection between this fascial plexus and the lymphatics draining the breast is most intimate. Cancer cells permeate from the breast along the finer lymphatics. Cancer cells grow along these finer lymphatic vessels, as microbes grow through the filter that will not permit their passage even under great pressure, they grow like the spreading roots of a clematis or a strawberry vine, and they grow against the lymph current as well as with it, with equal rapidity in all directions. Handley believes that the axillary glands are infected by way of the fascial plexus and by permeation, rather than by the subareolar plexus and by an embolic process. The skin above is drained into this plexus, the muscle beneath is drained into it, it may be the most important lymphatic drain from the mammary gland, it communicates with the lymphatic glands of the mediastinum, also with the subserous plexus of the pleura, and with that of the peritoneum. From and through this fascial plexus, cancer cells are transplanted into the skin, into mediastinum, to the pleura, to the peritoneum, to the liver, and to other abdominal organs. It is the great cancer route through which cancer cells are disseminated, by the slow process of permeation, rather than by a precipitous embolic process.

Metastases to the long bones, as to the humerus, near the insertion of the deltoid, or to the trochanter major of the femur, is likewise along the fascial plane.

Halsted says, "My views as to the dissemination of carcinoma of the breast agree so well with Handley that I may in justice to him, who has formulated and expressed them so well, quote now and then from his admirable chapters."

The dissemination of cancer cells to the opposite breast is by permeation along the fascial plane, across the lymphatic "water shed" in the median line, sometimes to the glands of the opposite axilla before the opposite breast is involved. Handley cites this latter fact as proof that permeation to the axilla is by way of the fascial plane, rather than by an embolic process through the subareolar plexus of Stiles.

Of 264 cases in which the site of recurrence was determined, 126 were in scar, 138 were without local recurrence in the scar, 56 were in the lymphatic glands of the axilla, the supra clavicular glands, and the mediastinal glands, 15 were in the other breast, 12 were in the spine, 13 were in the bones of the skull, 14 were in other bones, 65 were in the lungs and mediastinum, 51 were in the abdomen, and 11 were disseminated. This means that a surprisingly small percent of recurrences take place in the axilla, or by way of the fascial plane. This is not surprising when the Halsted, Warren, Meyer, and similar operations are considered in the light shed by the monumental work of Handley. Halstead paid adequate attention to the axilla, and but little or no attention to the fascia with its lymphatic plexus. He removed an area of fascia corresponding to his first skin incision, but no more. While pursuing cancer in cells and through the axilla, he permitted those "permeating" along the fascial plane to escape, he took no account of the fact that cancer cells permeated along the fascial plane equally in all directions, and that a complete operation must pursue cancer cells with equal thoroughness in all directions. Again, in the light shed by that monumental work of Handley, it is not surprising that the Halsted operation eradicated cancer in the axilla, while it permitted cancer cells to permeate unhindered along the fascial plane to the inevitable recurrences in the scar, lungs, or abdominal cavity.

The Warren and the Meyer operation give as little heed to the fascia as does the Halsted operation.

In a paper read at Atlantic City, by Porter in 1907, on the technic of the operation for cancer of the breast, I cull the following: "All of the greater pectoral except the clavicular portion, and all of the lesser pectoral with axillary fat and glands, and the breast with its coverings must be removed." No mention is made of the fascia, and apparently no attention is paid to it except as it covers the muscles named. Rodman in discussing this paper emphasizes the statement that the muscles should be removed. Otherwise, the axilla can not be properly cleaned, the muscles themselves are not

necessarily involved. The muscles and the fascia were removed because they were in the way.

Very recently the question of the routine removal of the pectoral muscles was discussed at several meetings of the French Society for the Study of Cancer. The opinion crystalized and expressed by Walther, is that it is best to remove the lower part of the greater pectoral in all cases, because it is very difficult, if not impossible, to remove all of the cancerous lymphatics without also removing the muscle, although the muscle is not involved and is never the seat of recurrence, unless the tumor be adherent to and directly involve the muscle at the time of operation.

Dawbarn, (32) in the *Annals of Surgery*, 1908, discussing the technique of the operation for cancer of the breast, lays great stress on the danger of forcing cancer juice into distant parts of the body through the axillary lymph vessels, and to avoid this danger urges that the axilla be attacked first. He quotes DaCosta who voices the same fears, but not a word about the deep fascia, and the dangers lurking in its lymphatics.

In criticising this Tansini method, Handley applies to it the same criticism that he applies to the Halsted operation, that the area of the fascia removed is no greater than is outlined by the primary incision of the skin. Handley further criticises the Halsted method because it includes the removal of too much skin and not enough fascia, and that it does not undermine the skin. But the Handley criticism of the Halsted method in 1908, does not apply to the Halsted operation of today. In fact it did not apply to Halstead at the time it was made. In 1907 in a paper read before the American Surgical Association, Halstead impressed but not convinced by Handley's work, said "If extension the most rapid take place beneath the skin and in the fascial planes, we must remove not only a very large amount of skin, and much larger area of subcutaneous fat and fascia, but also strip the sheaths from the upper part of the rectus, the serratus magnus, the subscapularis, and at times, from the latissimus dorsi, and the teres major. Both pectorals must, of course, be removed." Perhaps the latest word, but not the last, by an American surgeon on breast operation for cancer has been spoken by Richardson, in the current volume of the *Journal of the A. M. A.*, in which he says that he sometimes but not always removes the fascia over the rectus and the external oblique. Rodman removes the rectus sheath in all cases in which the cancer involves the inner hemisphere of the breast. Jackson states that he generally removes the fascia as suggested by Handley.

No one would advocate a less thorough removal of infected glands in the axilla than is conducted by the Halsted operation, but the same thoroughness must apply to the removal of cancerous lymphatics in the fascial plane, and it must never be forgotten that

these cancerous lymphatics may give no evidence of their presence. The surgeon can determine the infiltrating edge of a cancer, but the microscopic growing edge is demonstrated by such painstaking labor as that of Handley or that of Heidenhain. The tumor may be freely movable, with its microscopic cancer bearing roots extending into the fascial planes still too feeble to interfere with mobility, but none the less demanding a radical operation, radical in the Handley sense. And what is radical operation in the Handley sense?

I shall not attempt to describe his skin incision, as many might prefer the Jackson, Tansini, or some other. Handley removes a circular piece of skin four or five inches in diameter, its center corresponding to the primary growth. The skin incision is not deep enough to reach the deep fascia, the skin flaps are undermined in the mid plane of the subcutaneous fat, or just enough fat is removed with the skin to insure its vitality. This dissection is continued until 10 or 12 inch circle of the deep fascia is exposed with the primary growth as its center. Next, an annular incision marking out a 10 or 12 inch circle of the deep fascia is exposed with the primary growth always for its center, is carried down to the muscles through the deeper subcutaneous fat and fascia, close to the base of the skin flaps. Next this circular area of deeper subcutaneous fat and fascia is dissected from the subjacent muscles for some distance from its circumference toward the center. The circle of deep fascia is to be raised about the circumference of the field of operation until the knife reaches the margin of the greater muscle, the axillary outlet, or the edge of the breast as the case may be. In the upper limit of the field it is useless to raise the fascia because it will be removed later with the greater pectoral muscle. Toward the opposite side, the dissection of the fascia will be sufficiently extensive to include the perforating branches of the internal artery, likewise the lymphatics accompanying them. Below, Handley removes the anterior layer of the rectus sheath, as far as included in the 10 or 12 inch circle. Externally, the fascia must be dissected up from the anterior edge of the latissimus dorsi and serratus magnus muscles. Next, the greater pectoral muscle, except its clavicular portion, and the lesser pectoral muscle are divided. The axilla is now cleaned, and the operation completed by removing the mass of tissue, cutting away all of the greater pectoral muscle except its clavicular portion, that part of the serratus magnus which arises from the digitations under the breast, and also the digitations of the external oblique arising from the fifth and sixth ribs. In severe cases, the lesser pectoral and all of the greater pectoral muscle must be removed. This is the Handley operation, it is an all around Halsted.

Is it too extensive? Let us not forget that Heidenhain, report

1889, found cancer in the fascia and tissues not removed in twelve of eighteen cases operated by Kuster. Of these twelve, eleven had recurrences, and the twelfth is not recorded. The Heidenhain report loses much of its value because it is based on cases operated in an earlier day, but it does conclusively demonstrate the necessity for an extensive removal of fascia with its cancer bearing lymphatic roots. Let us not forget the report of Greenough, Simmons, and Barney, that more than 80 per cent, perhaps 90 per cent recurrences can be traced to insufficient removal of fascia.

Time does not permit a more exhaustive discussion of this subject, but a more modern operation for cancer of the breast, must combine the Halsted thorough cleaning of the axilla, and the Handley extensive removal of the fascia.

Having located the enemy, what shall be the plan of attack? Among others, Meyers, (Bickhams Operative Surgery) makes a strong plea for the axilla to chest operation, but in describing his operation he uses such expressions as "forcibly retracting the breast outward" and "forcibly retracting the breast inward." Whether the attack be from the axilla to the chest, or from the chest to the axilla, or fascia-axilla-breast, (Handley) is a matter of lesser importance, provided that rough handling of the breast be avoided. There must be danger in this "forcibly pressing," although cancer cells at this time and in this region are not likely to be transported by the lymph current, but the danger of cancer cell implantation continues to exist so long as any part of the breast remains unseparated, or in contact with a fresh wound surface. If cancer juice be squeezed from the breast, it makes no difference whether that cancer juice be forced into the distant organs by way of the axilla, or by a shorter and a more direct route, the fascial plexus. Further, if cancer juice be expressed from infected tissues, these juices must come in contact with fresh wound surfaces, an additional reason for gentleness in manipulation and for protecting fresh wound surfaces in every possible way. In regard to the manipulation of the heart during operation, that battle cry of Crile, **gentleness**, applies with especial force, regardless of the plan of attack.

I said that I would not take up the skin incision, but I do not understand why the Tansini method has not obtained recognition in this country. It is true that Handley threw the weight of his authority against it, but even this ought not have consigned it to oblivion. Handley also arraigned the Halsted method. The Tansini operation contemplates the trans-position of a dorsal flap containing a portion of the latissimus dorsi and subscapularis muscle with the dorsalis scapulae artery. The flap, the nutrition of which is assured by the fact that it carries with it considerable muscle and its nutrient artery, is made to cover the defect left by movement of

the skin. But even Handley says that there are certain cases in which the Tansini operation is of value.

To resume:

1. The slightest asymetry of the breast, the faintest dimpling of the skin, or a well marked "peau d'orange" suffices to make the diagnosis.

2. If in doubt, a sweeping incision into the growth may clear the diagnosis, being careful to seal the wound. Immediate operation must follow. Exploratory puncture is to be condemned.

3. Fifty per cent of breast cysts are cancers, all must be carefully examined.

4. Cancer cells are disseminated by dissemination, rather than by an embolic process.

5. The deep fascia must be extensively and the axillary glands completely removed.

6. The Handley operation is the best, because of the attention to the deep fascia.

7. The Tansini operation has a place.

8. Regardless of the plan of attack, all suspected tissues must be handled with gentleness until removed, that cancer juice may not infect the wound, or cancer cells be forced to distant parts by way of the lymphatics.

9. Procrastination in the treatment of tumors is to be condemned, the cancer cells creeping onward in an ever widening circle while the patient waits for cooler weather, and while the doctor waits for all the typical symptoms.

10. Quoting Richardson, every tumor of the breast requires an operation today.

Finally, the operation must be performed with the promptness of Richardson; with the gentle hand, the keen knife, and the masterly bloodless dissection of Crile; with the thorough removal of axillary and sometimes supraclavicular glands of Halsted; with the wide removal of fascia of Handley; and with painstaking prevention of local implantation of cancer cells of Wertheim.

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DISCUSSION OF PAPERS OF DRS. PRENTISS AND LITTIG.

D. S. Fairchild, Clinton: To my mind these two papers are very valuable contributions to the subject of cancer of the breast. There are two points in relation to this matter that should be dwelt upon particularly. The first is in regard to diagnosis. Cancer of the breast is so common, or at least tumors of the breast after fifty years of age are so frequently malignant, that it seems to me we ought to assume a probable malignancy and if we cannot satisfy ourselves the tumor is not malignant, proceed to a radical operation. If it is clearly non-malignant, a more conservative operation should be practiced.

Dr. Littig has pointed out the very great importance of the removal of the adjacent fascia by making a wide dissection. A well-planned scheme should be adopted of including all the tissues that the anatomists have shown to us might contain these cancer cells. I have removed quite a number of tumors of the breast by radical operation that were shown afterwards not to be cancer, with the idea that they were. It is impossible for us to determine in many cases without a well equipped clinical laboratory at hand whether or not the growth is malignant at the time of operation, and consider a limited dissection on the ground of the tumor being an adenoma or cystic growth. I think the last five cystic tumors of the breast that I have removed were not malignant, and I have never regretted that I made the radical operation, because it was impossible for me at that time to determine with absolute certainty that it was not malignant, and I assumed that it was because I had no proof to the contrary, especially as we are told that 50 per cent. of cystic growths of the breast are malignant.

I. N. Crow, Marengo: I wish to speak particularly in regard to Dr. Prentiss' paper, in that I have had the pleasure of working with him for several years and feel that I thoroughly understand his methods of teaching.

Prof. Prentiss in speaking of the non-limiting membrane of the mammary glands, brings this idea to me that this fact might account for the early and rapid proliferation of carcinoma into the surrounding tissues, about the mammary gland, as compared to its rapidity of invasion from other origin. Even in the functioning gland we find the cells multiplying at a tremendous rate, almost a picture of a pathological condition, and yet nature provides for a halting of this, when the desired amount are produced. How easy it would be then, it seems to me, to have this equilibrium disturbed in a resting gland, and to an abnormal state, producing carcinoma.

I should like to emphathize another fact that Dr. Prentiss called your attention to, viz: that the lymphatics are located in the connective tissues, not in the tissues well supplied by blood, as muscle, etc.

From a developmental point of view, we find that the drainage in the early stage of the embryo is taken care of by the veins, and that the lymphatics are really a secondary development, and so the tissues that have a great deal of blood have no occasion for a large number of lymphatics. Hence the accumulation of the lymphatics in the connective tissues. Therefore, we should be very careful in removing all connective tissue found in the immediate vicinity of the cancer. Dr. Littig referred to this procedure in his paper.

I should like to refer to a case that I had not long ago in consultation with a colleague that illustrates a few of these points quite well. The diagnosis was not hard to make. In fact, it seemed fairly far advanced and an immediate operation was recommended. That the metastasis through the superficial lymphatics takes place quite late, is true I believe, in that we found in the supraclavicular region (extending as I did, the incision recommended by Jackson, up over the clavicle) several glands which undoubtedly were drained into from the superficial region of the mammary gland. The lymphatics leading into these glands evidently followed the superficial veins found in this region which empty into the subclavian vein. On later examination these lymph nodes showed carcinomatous cells, not of the particular arrangement of the primary carcinoma, but of a very suspicious type. Therefore, in operating in the later stages, we should keep in mind this possible location of malignant glands and remove them.

Dr. Littig seems to think that it doesn't matter whether you begin at the outer edge and dissect in, or begin at the gland and dissect out. As I mentioned a minute ago, I used the Jackson incision, with which you are no doubt all familiar, and made the dissection from the axilla in toward the mammary gland, exposing the large axillary vessels with their accompanying lymphatics first. This, it seems to me, is the easier and proper method, for two reasons; first: you encounter the blood vessels at their origin, where you can clamp or ligate the same and thereby make a more nearly bloodless dissection as compared to beginning at the mammary gland and working toward the axilla, meeting the numerous branches. Secondly: by beginning at the outer edge we cut off the

source of invasion of the lymphatics and lessen the danger, I believe, of squeezing the carcinomatous cells out into the adjacent tissues.

I will say that although this was my first attempt at resecting the mammary gland on the living, it was fairly easy, and I feel like congratulating myself on having had the opportunity to work with Prof. Prentiss, for I feel that it was only through the anatomical work that I had with him that enabled me to accomplish the work so easily.

D. C. Brockman, Ottumwa: Dr. Littig left out the best part of his paper—the part that should have impressed on every physician practicing in Iowa, which is that every tumor of the breast should be removed immediately. Every tumor of the breast is a surgical condition. The doctor who will persistently paint the breast with tincture of iodine is a criminal. I want that to soak in. I tell you we are losing cases—hundreds of them—every year from procrastination. Let's stop it. We know better. There isn't a doctor in this house but what knows better than to paint a tumor of the breast with tincture of iodine, and yet half of you are doing it now. And why? I don't know and you don't know. Simply because it used to be done years ago. Let's not do that. Let's remember that every tumor of the breast should be removed at once.

I do not entirely agree with Dr. Fairchild in the removal of every breast because there is a tumor in it. A young girl comes to me with a tumor that has existed for a year or two or three. I say to myself, "this is probably an adenoma, and I am going to enucleate by a sweeping incision under the breast, turn the breast up and remove the tumor from the posterior surface, and if it is not cancerous, I will not remove the breast.

In regard to the removal of the breast, the last speaker (Dr. Crow) sounded the keynote to success, in commencing above and tying off all the large vessels first; then you have a dry field and an easy operation. The man who commences at the outside and works in, or begins below and works up, is going to have a bloody operation all the way through.

Let's all remember one thing that was impressed by both Dr. Prentiss and Dr. Littig, especially the latter: the great importance of removing the fascia. Muscles never convey cancer cells; fasciae are always full of lymphatics that will carry the cells in every direction. Let's remove the fascia down to the ribs—as some one said, flay the ribs in every cancer of the breast.

Another thing: let's stop operating on young women with cancer of the breast. It does no good; it does harm every time. I will never again attempt to remove a cancer of the breast of a woman under thirty-five years old, whatever her build is, and never under forty years old if she is fat; it won't do any good. The older the patient the better the results, because the old, weazened-up woman has weazened-up lymphatics that will not carry the cancer cells; while the fat young woman will die just as quickly as if you had not operated on her.

Geo. W. Crile, Cleveland: I ought not to take up the time of this Society any further, but I rise to express my appreciation of the very excellent papers of Dr. Prentiss and Dr. Littig. I would like also to add a word on the necessity of looking surgically upon solitary tumors of the breast. I have recently had occasion to review practically all of the cases of cancer of the breast that I have had under my care—a little over two hundred cases. I divide all cases of cancer of the breast at the time I see them first into three classes: first, those in which the cancer has not involved the skin nor the axillary glands; in other words, the first group of cases are those in which the cancer is, according to investigation at that time, still limited to breast tissue. This we could call a favorable group. The second group I classify as the unfavorable group. They include all the cases in which the skin and some additional tissue are involved. The third group are those that are hopelessly involved. I wish to say that of this series, in Group I, 80 per cent. remain cured for three years and over; while in Group II, this percentage drops to 25 per cent. This to me is a tremendously strong argument that we must not allow our patients to go until they get into the second class, and we will have 80 percent cured.

Dr. Prentiss: The point that Dr. Crile made about the first group of cases is, I think, borne out by the anatomy. The plexus is simply an

enlargement of the lymphatic plexus of the integument, the ducts of the glands simply causing a dilatation and therefore, if the involvement has not reached beyond the gland structure itself, it indicates a large percentage of recoveries. The point that I hoped I made clear was that when it gets beyond that point it simply belongs to the general integumentary lymphatic system, and then, as we can see, it goes in most any direction it sees fit.

Dr. Littig: Dr. Crile just called attention to the fact that the prognosis is not good when the axillary glands are involved. I question whether that is due to the fact that the axillary glands are involved, but I rather suspect that it may be due to the fact that while they have been increasing in size, the cancer cells have been spreading in other directions.

The Halsted thoroughness must also be applied to removal of the fascia. I do not think it makes any difference where you begin, but I would say that it is the logical thing to do first that part of the operation which is most tedious. If you are going to make a dissection of the fascia, that is certainly a tedious part of the operation, and I believe the Handley proceeding is perfectly logical.

We have heard so much danger of milking cancer juice, that is fluid containing cancer cells, into the lymphatics. Cancer juice is a bad thing to smear around on an operation field, and that led me to the statement that it is exceedingly important that the tissues be handled with gentleness. They must not be squeezed. In some of the descriptions we read about it is said that the breast must be forcibly pulled, first in one direction and then in the other. All this forcible pulling is certainly to be avoided.

SOME POINTS IN THE DIAGNOSIS AND TREATMENT OF CARCINOMA OF THE UTERUS.*

W. B. LAFORCE, PH. B., M. D., Ottumwa, Iowa.

Introduction. It is not my purpose to go into detail in either the matter of diagnosis or treatment. But to present a few points under each heading that recent advance in our knowledge suggests, and to emphasize the necessity of some means whereby there may be a more general diffusion of this knowledge among the laity and especially as to the early recognition of the disease by them.

Frequency. I think there can be no doubt that cancer of all kinds is increasing in all civilized countries. To be sure much of our knowledge of its frequency is due to both more accurate diagnoses, and to better collection of statistics; but those investigators who have studied the subject carefully are united in the belief that the disease is increasing and probably, largely because it seems to be, at least in part, a disease of civilization.

In a comparison of the mortality in New York state from cancer and tuberculosis for the years 1909 and 1910, we find there were four hundred and seventy more deaths from cancer in 1910, than in 1909. While there were only 99 more from tuberculosis than in the preceding year. Thus while tuberculosis is practically stationary or decreasing, cancer is on the increase. Instances could be multiplied but we will simply accept it as a fact. According to the last census report there were seventy-five thousand deaths from

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cancer in the United States in the year 1909, and one hundred and sixty-three thousand from tuberculosis. Thus approximately half as many die from cancer as from consumption. The deaths from cancer are exceeded only by tuberculosis, heart disease, enteritis, pneumonia, and nephritis, considering the whole United States. While "in the state of Michigan," I quote from the bulletin on cancer published by the state board of health for distribution among the laity, cancer is the cause of five per cent of all deaths. With the exception of heart disease, tuberculosis and pneumonia, cancer kills more people than any other factor.

On the basis of seventy-five thousand deaths per annum, it is safe to say there are two hundred thousand people in the United States at the present time that have cancer.

In England the report of the Registrar General in 1906 shows that one man in eleven over thirty-five years of age will die from cancer and that one woman in eight over thirty-five years of age will die from the same cause.

Out of every four hundred and sixty-two women over thirty-five, eight will die this year; and in every eight, one will die of cancer. Of people of all ages one out of every twelve will die.

These are certainly alarming conditions as to the prevalence of cancer. When we consider how much suffering the disease causes and what a horrible disease it is to nurse and take care of, and how merciless and inevitable is its onward progress, we may well consider whether or not we are doing all that can be done to fight it.

Diagnosis. The great need of early diagnosis is seen from the large number of cases that come to the surgeon too late for any hope of cure.

In part, this is due to neglect of the patient to consult a physician, and secondly, because physicians often do not recognize the conditions when the patient does come.

I am convinced that physicians are to blame in this matter and are guilty of neglect not because of ignorance of symptoms or of the clinical course of cancer, or how to determine the presence of cancer, but because they neglect to use the knowledge they have, neglect to make a thorough examination, or get a thorough history of the case, or, if in doubt, neglect to use or get some competent pathologist or clinician to use such tests or methods of examination as will determine the condition. Such neglect is criminal and if similar neglect was made in treatment of a fractured bone or other similar surgical case the doctor would soon be sued for malpractice and very justly.

As Dr. Rodman says, "in cancer of the breast it is more important to make an early diagnosis of cancer than it is of appendicitis."

The points to be determined in diagnosis are:

1. presence or absence of cancer.
- 2, if present, the location as cervix or fundus.
- 3, the kind as scirrhus cauliflower or adeno-carcinoma.
- 4, the degree of extension, whether confined to the uterus or extending beyond it and the condition of the lymph glands.
- 5, whether operable or inoperable.

The chief point of course is the early diagnosis of the presence or absence of cancer, every married woman who comes for advice in regard to a probable gynecological condition should have a gynecological examination. I have heard good physicians in this society state that every woman over forty-five years old with a vaginal discharge, bloody or otherwise, should have a vaginal examination. But I insist that the rule should be that in married women at least a gynecological condition demands a gynecological examination.

In a suspicious case a piece of the cervix should be removed, or a curettement done for microscopic examination by an expert microscopist. Here let me emphasize the fact that a microscopic diagnosis of beginning carcinoma of either the cervix or the fundus is sometimes difficult, and the word of no tyro should be taken.

Differentiation between squamous cell carcinoma of the cervix and adeno-carcinoma of the cervix is not very important. Treatment is the same for both. To be sure the adeno-carcinoma grows faster and breaks down more rapidly; therefore removal is, if possible, more urgent than in the squamous celled variety.

Indications and Contro-indication for Radical Operations. In one of the gynecological clinics at Vienna during certain period over four-fifths of the cases of cancer of the uterus came when it was too late to hope for cure by a radical operation. However, by reason of diffusion of knowledge among both the profession and laity, and by reason of improvement in method and technique in operating, Prof. Wertheim ten years later felt justified in undertaking the radical operation in fifty per cent of all such cases and during 1909 and 1910 in over sixty per cent.

The general appearance of the patient is not always a reliable criterion. Cancer may be well advanced or inoperable and the patient looks healthy. On the contrary, patients may be even cachectic and cancer be not far advanced locally. To be sure if much cachexia is present or if there is a weak heart or the patient is over sixty years of age, a very severe operation is contra-indicated.

When the uterus cannot be drawn down to the vulva on account of infiltration of surrounding tissue the case is generally inoperable. However Wertheim has proven by exploratory incision and inspection that some times the bladder and uterus and rectum

can be loosened sufficiently so that an operation can be undertaken with hopes of cure.

Lymph glands should be investigated through the rectum which will often require an anesthetic. Often an exploratory laparotomy will be necessary to determine whether or not the case is one suitable for radical operation. In fact, every laparotomy in these cases is to a certain extent an exploratory one.

Dilation of the ureters is generally a contra-indication unless they can be dissected out freely and the dilatation proven to be entirely from pressure outside of the ureters. It is possible of course to make a resection of the ureter and make a new implantation; but such cases are most always beyond hope of cure.

Involvement of the bladder is often indicated by a collar like retraction and wrinkling of the peritoneum.

Treatment. Ten years ago few operators cured more than one case in ten of those they operated on for cancer of the cervix. The statistics were more or less confusing as in their report of cases of cancer of the uterus operated on they included cases of cancer of the body of the uterus which is generally more easily cured. Within the last ten years fifteen to thirty per cent of cases operated on for cancer of the cervix are being cured, that is, are free of the disease after five years; moreover, a larger percentage of cases are being operated on so as probably twice as many are being permanently cured than there were one or two decades ago.

The reasons of this improvement are as follows, first earlier diagnosis, second better method of plan of operation, third more skill in the technique.

As to the second point, a better plan of operation, it is no doubt that the chief improvement has resulted from treating cancer of the uterus in the same way that we have learned was necessary in cancer of the breast, viz. to remove the lymphatics and lymph glands which drain the diseased tissues. This necessitated removing a larger amount of the tissues around the uterus and upper part of the vagina than was possible in the former method of vaginal hysterectomy. Most operators now choose the abdominal route for the radical operation. It will be conceded, I am sure, that only a radical operation should be undertaken when one attempts to cure cancer anywhere.

In cancer of the neck of the uterus a radical operation means removal of:

- 1, the uterus and upper part of the vagina; 2, the cellular tissues around the uterus including the broad ligament; 3, removal of lymph glands draining the diseased tissues.

In order to do these three things properly it is necessary to expose the ureters in the lower part of their course.

If the growth involving the cervix is ulcerated it often contains virulent germs which may be a source of infection of the peritoneum, parametrium, etc., during the operations. Therefore, infection from this source should be very carefully guarded against.

Prof. Wertheim of Vienna, under whom I was Hospitant for several months, prevents this possible source of infection first, by a thorough curetting and cauterization of the tumor, and secondly, by cutting through the vagina from above when ready to remove the uterus, but only after the cervix and upper part of the vagina have been clamped off by right angled clamp forceps and cutting below the clamp.

Previous cutting through of the vagina below as recommended in many text books only increase the danger of infection both from virulent pus germs and from cancer cells and combines the disadvantages and danger of both the vaginal and abdominal routes.

In treatment of cancer of other parts of the body it occasionally happens that if the tumor returns after an operation for its removal, later operations result in a cure. In my own experience this was the result in four cases. In one of them, a cancer of the face, cure resulted only after the fourth removal. One was a case of cancer of the uterus, removed by a Chicago surgeon per vaginam. There was a recurrence in the roof of the vagina in the line of incision. A thorough removal of that in a second operation resulted in cure. Doubtless therefore in a good many cases of recurrence following cancer of the uterus an exploratory laparotomy would be justifiable and helpful.

So called in-operable cases should be given proper palliative treatment. Probably that which does the most good is removal of the growth by thorough curettment and cauterization. With regard to this treatment the results of Dr. John Byrne of Brooklyn should be remembered. Out of nearly four hundred cases of cancer of the womb, twenty per cent were alive after five years.

A removal of the ovaries and consequent trying of the ovarian arteries would decrease the blood supply to the growth and thereby prolong life.

At the second International Cancer Congress, which met at Paris last October, the principal topics for discussion were the phenomena of immunity. Several cases of cure were reported by vaccination; one was cancer of the breast; two were cases of in-operable sarcoma. The principal one which this method was based was first demonstrated in animals in 1907 in the New York Cancer Laboratory and were referred to in the Annual Reports of 1908 and 1909. In 1910 the Laboratory reported before the American Association for Cancer Research in Washington. I quote from the bulletin "Vaccines prepared from transplantable cancer in animals produce the same reaction and apparently served the same purpose

in the vaccination of human being as vaccines prepared from human growth. It is impossible to determine what the possibilities of this method may be. It seems best applicable to cases in the early stage of the disease. It is our belief that in the future, a method of separating the essential factor from these masses of tissue may be found, in which case the outlook for vaccination as a means of treating cancer will be greatly improved." This New York Laboratory has pursued its investigation along the theory of the parasitic causation of cancer. Quoting again "It is needless to point out that the establishment of the parastic theory of cancer can only endow us with the greatest feelings of optimism as to the future of cancer research. If cancer is an infectious disease then it is preventable and curable. For some time past in this laboratory we have been able to successfully treat animals afflicted with cancer: whereas we are only now prepared to apply those principals to human beings."

Surely such favorable indications of benefit to be derived from cancer research should be sufficient ground for the government to provide for the carrying on of such work.

Last March, President Taft sent a special message to Congress recommending an appropriation of fifty thousand dollars for investigation of cancer in fish but nothing has been done by the government for studying the disease in the human animal or in any way fighting the evil. However the profession already knows enough to be able to reduct the mortality of the disease very much, probably not less than fifty per cent. if the knowledge could be widely disseminated.

The great need at the present time is for the public generally to understand the early symptoms of the disease and the necessity of early operation.

How can this information be best given out?

The American Medical Association has appointed a Council on Health and Public Instruction to undertake the problem of educating the public on medical subjects. But in a recent correspondence with the secretary of the Council, I learn that it has done nothing on the subject of cancer.

I am sure all will agree that the public ought to have such information and that it be widespread. The State Board of Health of Michigan has made an effort along this line for the public of its own state. A very good bulletin has been prepared and used for general distribution. But its work is necessarily local, and it would seem that our own State Board of Health has a similar duty.

I would therefore suggest that this society could help in the matter by taking formal action requesting the State Board to undertake this work for the people of Iowa.

Discussion.

J. F. Herrick, Ottumwa, Iowa: The papers that we have just heard have been of the very greatest importance—not only that of Dr. La Force, but that of Dr. Littig and Dr. Prentiss. This paper of Dr. La Force which is under discussion is on a subject that, as the doctor says, should be of the very greatest interest to all of us. I only want to emphasize some of the points that he has made. In my experience (which is limited, of course), three-fourths—I may say nine-tenths of the cancers that I have seen, whether of the uterus or the bowel or the breast, have been in an advanced stage. They have been dallied with, either by the patient or by the physician, until it is too late to do anything. We occasionally see cases where the symptoms are so mild that no one thinks there is any danger until it is almost too late to do anything. This is not uncommon in cases of cancer of the cervix. In those cases probably no one is too blame, but, as Dr. La Force has said in his paper, the important thing is to educate those women to know the first evidence of possible danger, and that is not always a bloody discharge. A vaginal discharge whether blood or muco-pus, coming or after the menopause is always a serious matter, and should be carefully investigated.

There was one point omitted in the doctor's paper which possibly he intended to speak of, and which I feel like mentioning now; and that is when a portion of the cervix is removed for examination, it should be frozen, sectioned and examined immediately, and if cancerous, the operation proceeded with without waiting; because I can't help but feel that if it is true that cancer is disseminated by handling and injuring of the tissues, as has been mentioned in former discussions, it is a mistake to remove a portion of the cervix for examination, and a week or two later do an operation. So that I should say the preparation should all be made for the radical operation, and the operation proceeded with immediately, if the condition was suspicious or proved to be cancer.

As to the nature of the operation, there is nothing to be considered, as the essayist said, but a radical operation, and that should be quite radical. Of course the operation in itself is dangerous, but if the diagnosis has been made, we know what non-operative treatment means. It means certain death. Therefore, although the operation itself may be dangerous, and very dangerous, yet in competent hands it is far safer than anything that can possibly come of delaying the treatment. I have seen more cancers return in the upper part of the vagina, I believe, following the removal of the uterus, than in any other part; therefore I would feel that great care should be taken in removing quite a section of the upper part of the vagina. The essayist mentioned this fact but I believe it should be further emphasized. The removal of the pelvic glands is sometimes very difficult, but, as stated a moment ago, it is almost absolutely necessary in order to secure a good result. In those operations there will be accidents; the ureter may be injured; the bladder may be injured at times; and sometimes the patient's life may be sacrificed earlier than it otherwise would be; but in the end many lives may be saved for a number of years, and the results will be far better than if they were neglected.

F. E. Sampson, Creston, Iowa: The cancer question has been very thoroughly discussed, but there is one that is still left open—the thing that touches us the hardest; that is, the question of an absolutely positive diagnosis at a time when operating measures will accomplish any good. The statement has been made that nothing short of a radical operation should be considered. A radical operation, to do any good, must be done at the time when often it is a question whether the patient has cancer or not. And then you who have done any amount of work don't forget the woman on whom you made an early diagnosis, she declined operation, and then never died of cancer; and you got a black eye. Considered in the abstract, this is all very good; but it is like the girl who asked the minister if there was anything wrong about dancing, in the abstract; and he said no; but they didn't dance that way. My friend La Force has presented some very interesting and vital questions. He makes some reference to technique. And how about preventing? Education of the people was one of the points. I wonder if we hadn't better take a dose of that ourselves? How many of us have left big scars scattered all around on the cervix, and then got up before the Medical Society and said that we never had any trouble from lacerated cervixes?

EMERGENCY SURGERY—NOT DUE TO ACCIDENTS.*

D. C. BROCKMAN, M. D., Ottumwa, Iowa.

Formerly the term "Emergency Surgery" suggested an accident—Now we know that the great majority of emergency surgery is not the result of accidents but due to internal causes.

By emergency surgery—we mean surgery that must be done now in distinction to that which we may elect such time as may be most convenient to all concerned.

Most work we are considering today is of a more imperative character than much of the surgery resulting from accidents. For example—while a broken bone should be cared for at once, it would do far less harm to neglect a broken leg for 24 to 48 hours than to allow a strangulated hernia or other form of intestinal obstruction to go unreduced for half that length of time.

My excuse for this appearance is to plead for prompt action in all emergency surgery, whether it be due to external or internal causes—but especially to impress on the minds of every medical man here today the importance of prompt action in every case where delay is likely to result in serious harm to the patient.

Among the cases of emergency surgery due to internal causes which we should consider today are:—acute obstruction of the bowels due to any cause but especially obstruction resulting from strangulated hernia; cases of acute osteomyelitis or pyogenic arthritis; gangrenous or hemorrhagic pancreatitis; acute appendicitis; acute mastoiditis; ruptured ectopic pregnancy; tumors with twisted pedicle.

These are a few of the many cases of death dealing infections and mechanical obstructions that require immediate surgical attention.

This is far too extensive a subject to be considered in detail—but a few of the salient points may be gone over in hopes thereby to impress the danger in delay while treating cases.

Observation leads me to say that more deaths result from neglect in the treatment of strangulated hernia than in any other condition of this group.

The mortality from strangulated hernia is appalling—almost 50 per cent.—while it should not be to exceed 2 to 5 per cent. if the cases were recognized and treated early. By early I do not mean in a few days. I mean **at once**—in two or more hours after first seen by the doctor.

There is absolutely no excuse for any doctor failing to make an immediate diagnosis in every case of strangulation in external hernia and diagnosis having been made it is his imperative duty to give relief at the earliest possible moment.

*Read before the Iowa Union Medical Society, Cedar Rapids, July 12, '11.

I am not an advocate of serious operations being done by the inexperienced or unqualified doctor. I mean the doctor who does only occasional operations—but I believe these cases constitute an exception to this rule under certain circumstances.

If a competent surgeon can be had at once it is far better for the patient to have such a doctor do the work—in this age of automobiles and fast trains such skilled assistance is usually procurable—but if not it is far safer for a doctor inexperienced in surgery to open up and relieve the constriction thereby saving the integrity of the bowel than to wait for a skilled surgeon to come in later and resect a piece of gangrenous intestine.

It would be hard to find a neighborhood in Iowa where there is not some doctor who is competent to do such work with safety even if not in the most skillful manner.

The treatment of strangulated hernia is most imperatively emergency work. The bowel must be released from the constriction at once—not tonight after a train gets here from somewhere. Not this afternoon—but **now**—just as soon as possible.

When first seen, if the strangulation has lasted but a short time, very gentle taxis may be made for a few minutes—very gentle and not to exceed five or six minutes with the patient in exaggerated Trendlenberg position—But as most of these cases occur in old men who have reduced the hernia many times, it is not at all probable that you will be able to replace it after he has worked at it for a much longer time than you are justified in doing.

If it is not replaced by a few minutes of gentle taxis, you should leave him with the hips elevated as much as possible, (after giving him a dose of morphine and atropin hypodermically if the pain is severe) while you go out and as quickly as possible make arrangements for an immediate operation.

If a hospital is near by have him moved there while you arrange to do the work.

In a few cases after being relaxed by morphine and atropin and retained in this position, reduction will occur spontaneously—this may occur but probably not.

Assemble assistance, material, instruments, etc., as quickly as possible; prepare patient by shaving; anesthetise him while in the inverted position and again make very gentle taxis for, not to exceed one or two minutes, in which time if reduction does not occur, a large area of skin should be sterilized by tincture of iodine and the operation proceeded without delay. The key note to success is prompt action along definite, systematic lines.

In all other forms of acute mechanical obstruction the same prompt action is imperative.

Here diagnosis is of most importance. Any person suffering from expulsive vomiting, severe colicky pains, accompanied by

noticeable peristalsis that always stop at a given point, obstipation with tympanitis, should be considered suffering from obstruction and a surgeon called in council at once.

Such symptoms occurring in a child, accompanied by mucosaneous bowel discharge has intussusception and must have an immediate section.

If obstructive symptoms occur in an elderly person who has gall stone history, one should suspect acute pancreatitis, for which the same immediate operation is his only hope.

A perforating ulcer of stomach or duodenum, acute gangrenous cholangitis, as well as severe pancreatic infection all produce the same train of symptoms and are seldom differentiated one from the other except by previous history, but as all require a prompt, abdominal operation, if possible done by an experienced abdominal surgeon as absolute diagnosis is not so important as is the fact that all these cases are emergency and must be so recognized and treated if we save our patients.

The price of success in medicine is eternal vigilance. The life and interest of our patients require us to be everlastingly at it, studying every spare moment, visiting clinics, attending medical societies, studying each case carefully every time we see it. This is the way we can do our whole duty to our patient; then let us charge a reasonable fee for it.

The day of the 50c examination and prescription and the \$1.00 a visit has passed; if your services are not worth more than that they are not worth anything; you are doing more harm than good and should stop practicing and your patrons will soon find it out and employ a doctor who is up-to-date.

Osteomyelitis is another emergency surgery disease that is usually not diagnosed until too late. The great majority of these cases are treated for rheumatism, neuralgia, sprain, etc., when every symptom points to a pyogenic bone disease.

When will the average doctor learn that rheumatism is never confined to one joint, that neuralgia never causes high fever and septic symptoms?

Every doctor knows these things now but don't think—don't apply the knowledge when he sees the case. The bad results in these cases are due to inattention to the simplest rules of diagnosis—to carelessness more than to ignorance.

Every doctor in this room knows that a sudden severe pain occurring in or near a joint, accompanied by fever and other symptoms of infection is either osteomyelitis or pyogenic arthritis and he also knows that the only way it should be treated is by very prompt surgical measures, yet I am afraid many of you will go home and treat the next case of infection of bone or joint for rheumatism until hope of cure without permanent deformity has

passed. I wish I could get every doctor here today to solemnly resolve that from this day on he would never treat a case of painful limb, which occurs suddenly in a young person, for rheumatism or any other disease until he had positively excluded pyogenic infection.

If I could accomplish such a result, I would do more good with this paper than I will be able to do in my whole life.

Acute appendicitis is another emergency condition and needs immediate operation.

No dictum in surgery has been more clearly proven than that more lives can be saved by prompt removal of every acutely inflamed appendix than in any other way. The people over the country are learning this and are compelling the doctor to give surgical treatment to such cases.

Let us stop our quibbling about old exploded theories that have become obsolete for a dozen years and face the undisputed fact that there is, always has been and always will be under medical treatment a large mortality, over 10 per cent. at best in acute appendicitis, while an operation properly done the first twenty-four hours will have a mortality of less than 1-2 of 1 per cent. Which is the better plan?

My plea is for you to act promptly as soon as you see a case of acute infection at the appendix; do not delay an hour; but have the appendix removed at once by the most competent surgeon accessible.

I will not discuss the diagnosis as this has been thrashed out so often that if one is not able to make a diagnosis, except in rare cases, he should cease to practice medicine as he is not a safe man.

I might go over many other emergency diseases but time forbids. One general proposition I want to announce as forcibly as possible. Every case of severe abdominal pain accompanied by vomiting and marked physical depression without diarrhea is probably a surgical condition and calls for immediate conference with a competent surgeon.

The Second District Society held its annual meeting in Davenport, Oct. 10. The attendance was good. This program was rendered:—Pupillary Manifestations, for the General Practitioner, W. E. Keith, Clinton; Vaccine Therapy, H. M. Decker, Davenport; Diagnosis in Obstetrics, H. R. Reynolds, Clinton; Vomiting of Pregnancy, E. B. Henderson, Marengo; The Treatment of Pneumonia, C. P. Howard, Iowa City; Otitis Media, F. E. V. Shore, Des Moines; The Treatment of Puerperal Septicemia, L. W. Littig, Davenport; Food Hygiene, C. C. Van Epps, Iowa City; The Diagnosis and Treatment of Acute Poliomyelitis in the Light of Recent Investigations, D'Orsay Hecht, Chicago; Pyloric Stenosis in Infancy, H. M. Richter, Chicago. The officers elected for 1912 were E. H. King, Muscatine for president; E. B. Johnson of Marengo and H. R. Reynolds of Clinton as vice-presidents; and J. V. Littig of Davenport as secretary-treasurer.

THE TREATMENT OF ACUTE LOBAR PNEUMONIA.*

C. P. HOWARD, A B., M. D., Iowa City, Iowa.

"Pneumonia is a self-limited disease which can neither be aborted nor cut short by any known means at our command."¹ If we have fully appreciated this warning of Osler we have progressed farther in the treatment of pneumonia than if we carefully memorized the physiological and pharmacological action of every drug in the pharmacopeia.

"Successive phases of medical opinion have left their mark on the history of the treatment of pneumonia and the disease continues to be the favorite field for a trial of each new mode of combating the febrile state."²

Pneumonia has run the gauntlet of the entire pharmacopeia past and present. To Skoda, George Balfour and Hughes Bennet do we owe a debt of gratitude for sounding the death knell to the heroic antiphlogistic treatment—the bleeding, blistering, purging and starving of the old school.

Before adopting any one line of treatment one must first realize that in dealing with pneumonia we are not dealing with a pure pulmonary condition but with a bacteremia of which the inflammatory condition of the lung may be the smallest part. Further, the extent of the lung involvement has nothing to do with the severity of the illness of the patient. The latter depends upon the seed and the soil, i. e. the virulence of the infecting organism and the resistance of the patient. Thirdly, one must realize that the mortality from pneumonia varies more or less in different years, epidemics and localities. Lastly, let us again insist that the disease is self-limited and tends toward spontaneous recovery in from 60 to 80 per cent. of cases, that is to say the great majority of the patients get well in spite of the doctor. However, in every 100 cases there are perhaps two or three that can be saved by a judicious and scientific management.

Before passing judgment on anyone line of attack, one must take into consideration the patient's age, social state, general health, and vital resistance as well as before stated, the virulence of the infection and the site and size of the lesions.

We must keep ever before us Musser's warning "It is the individual who needs the treatment, not the disease."³ The two main indications in the treatment of pneumonia are to relieve the toxemia and to support the circulation. How best can we accomplish this?

1. General Management.

The usual general hygienic rules for any febrile disease hold good for pneumonia. A single bed with a good spring mattress should be insisted upon, to enable proper nursing and the daily examination of the patient. The clothing should not be heavy enough to

*Read before Second District Medical Society, Davenport, Oct. 10, 1911.

interfere with the respiratory movements and not too light to make the patient uncomfortably cold. A light jacket of absorbent cotton may be worn until convalescence is well established. An abundance of fresh air must be supplied. Northrup has been most energetic in his support of the fresh air treatment. Some physicians are now placing their patients out of doors even in the severe winter climate of Canada. In the three or four cases observed by the writer there was a surprising improvement in the patient's respiratory rate as well as in the oxidation of the blood.

Absolute rest, both mental and physical, is a *sine qua non*. No visitors should be allowed and every form of excitement prohibited.

2. Diet.

This should be both light and nutritious and may include milk and all the various meat and vegetable broths that a ferile patient fancies. A soft boiled egg and soft toast may also be allowed. Let us here enter a strong protest against the use of artificial foods which do the patient no good and had much better be emptied into the sink than into the unresisting patient. Naturally the food must afford the proper amount of nutrition (calories) as well as being in such a form that this can be most easily acquired by the patient's organism. None of the artificial foods meet these two demands.

3. Special Treatment.

All drugs having failed to combat the disease, great things were hoped for bacterial therapy in pneumonia. Serums were first tried but with disappointing results. Thus Anders⁴ found that in 535 cases collected from the literature there was a mortality of 18.3 per cent., a figure little or no better than with the older expectant plan. Subsequent smaller series have proved no more gratifying, nor is this to be wondered at for three reasons: in the first place the serum of immunized animals is antibacterial only, while most of the symptoms are due to the profound toxemia; in the second place there is a great variety of strains of pneumococcus, and lastly the various brands of serum vary considerably.

More may be expected of vaccines or killed cultivations of the pneumococcus. The main principle here is the necessity for the stimulation of the opsonin-elaborating machinery, in order to provide a larger supply of available pneumococcus opsonins. Better results are obtained from the use of a vaccine prepared from the actual pneumococcus responsible for the infection than from a stock vaccine. An initial dose of from 5 to 25 millions should be given at the earliest possible date, and thirty-six to forty-eight hours later a second dose two to five times larger than the first.

4. Symptomatic Treatment.

(a) Toxemia. Little or nothing can be done to diminish the toxemia apart from the drinking of water and the occasional use

of a tepid or cold sponge to aid the kidney and skin in elimination. Subcutaneous or even rectal infusions of normal saline may be tried in very toxic delirious cases which cannot be persuaded to drink enough fluids. The bowels should be opened at the onset by a mild mercurial purge followed by saline laxatives throughout the course of the disease.

(b) Fever. Systematic cold sponging used as in typhoid fever, is not only not good practice but is actually contraindicated, for cold baths are usually badly born by these patients. Further, the fever is an expression of the bacteremia, and Hare⁵ believes may be positively advantageous, possibly even aiding the economy to withstand the illness.

If, however, there be hyperpyrexia (105.8 degrees F.) a sponge bath at 80 degrees F. or in the case of a robust young adult an ice pack may be tried. This may be further assisted by an ice bag to the head which also diminishes headache, decreases delirium and so promotes sleep. As far as the various antipyretic drugs are concerned, they are not only useless but actually harmful owing to their cardiac depressing effects.

(c) Pain. The relief of pain is of prime importance. When first called to see a patient with pneumonia, it is wise to give a hypodermic of morphia (gr. 1-6th) or a Dover's powder (5-10 grs.), and so provide a few hours' rest which will do more to fortify the patient against the coming ordeal than all the cardiac stimulants. Locally an ice bag to the affected side is of service in an adult, but the writer believes in the old fashioned linseed poultice for use in children who bear cold applications badly. Strapping with zinc oxide plaster is very efficacious, the only disadvantage being that it interferes with the proper subsequent physical examination.

(d) Embarrassed circulation. For years Wood and other leading therapeutists recommended the use of cardiac and vascular sedatives—as aconite, veratrum viride or antimony—under the erroneous belief that the supply of blood to the engorged pulmonary areas was diminished thereby. This practice has gone out of vogue because it is now realized that the state of the lung is the result of an acute infection involving the whole system and that at best it is only suited to a small proportion of cases and then only when the patient is seen in the early stages.

For some time adrenalin was fashionable, but it was soon learned that the effect even in intravenous injection was too transitory to be of any value. When there is evidence of a dilated right heart with a failing pulse, especially early in the pneumonia of a plethoric man, venesection does more good than all the depressing drugs.

If, however, later in the disease the pulse is weak and intermittent, if the pulmonary second sound is accentuated and the first

sound toneless, some cardiac stimulant is no doubt indicated. Then one must choose carefully the drug to be used. Thus, if there be no hypertonus one may give alcohol in full doses at regular intervals or digitalis in some form. Of the latter the infusion, the fluid extract, or the tincture are to be preferred to any of the glucosides or other active principles of digitalis. If the patient has hypertonus, nitroglycerine may be used, but let me remind you that this drug is not a cardiac stimulant per se but only aids an overworked heart by lightening the load and not by stimulating the cardiac muscle as does digitalis.

A failing pulse in a young man requires as a rule only a little strychnia, or aromatic spirits of ammonia, or Hoffmann's Anodyne.

Many advise the early use of inhalations of oxygen which should not be kept as the last resort just before sending for the undertaker, as is generally the case. Atropine may be of use in the later stages of the disease if collapse develops. Hare believes that it is beneficial in the circulatory difficulties of pneumonia by aiding in the reestablishment of the circulatory equilibrium, i. e. by equalizing blood pressure in all parts of the body; further, that it lessens sweating as well as the secretion of the mucus in the lung.

(e) Cough. A distressing cough which disturbs the patient's rest is best relieved by Dover's powder or heroin and codein. The use of expectorants is as a rule entirely unnecessary and often harmful because the alveoli of the lungs and not the bronchial tubes are affected. Their only indication is for the relief of a persistent bronchitis in the stage of resolution, when ammonium chloride in 5 to 10 grain doses may be exhibited.

Let me conclude with two quotations from Hare: "The physician must be a passive spectator unless some definite condition exists which demands treatment." "In pneumonia the motto should be 'let the patient get well and give drugs only when they are indicated.' "

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The Cherokee County Society held its regular meeting at the State Hospital, Cherokee, on Tuesday, Oct. 24th. Dr. P. B. Cleaves, the President, gave the annual address, the title being, "What Cherokee County's Physicians Most Need."

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

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No. 5

Concerning the Journal.

We have been informed by letter and otherwise that some members of the State Society do not understand the relation of the Journal of the State Society to the Iowa Medical Journal which is the private property of Dr. Dorr. It will be remembered that at the last session of the State Society, it was decided to establish a medical journal to be owned by the State Society. Dr. Dorr has been printing the papers and transactions under contract for the past five years.

When the official journal was established, there was a proposition to take over the advertising and thereby leave but one journal in the field, any member will find a report of the Committee appointed the previous year to consider the question of establishing a state journal. On page 47 will be found that the House of Delegates instructed the Board of Trustees to purchase of Dr. Dorr, all his rights in advertising material by him, paying for same 100 cents on the dollar for one year for all material the Board of Trustees desired to carry. It was understood at the time that this arrangement was satisfactory to Dr. Dorr. Just prior to the meeting of the Board of Trustees for the purpose of carrying out the instructions of the House of Delegates, Dr. Dorr notified the members of the Board that the provisions passed by the House of Delegates were not satisfactory to him and that he would not be able to accept the proposition which the House of Delegates had made unless he could control the advertising policy of the journal for one year and receive all books for review, which were to become his private property. The Board of Trustees did not feel that they were authorized to accept Dr. Dorr's proposition and therefore concluded to publish the journal

independantly without any advertising matter. It was well known to the Board of Trustees that there were serious questions whether the Society's journal could carry advertising under the ruling of the post office department as second class matter.

I beg to assure the members of the profession of the state of Iowa that there was no effort to deprive Dr. Dorr of any rights he might possess as the editor of the Iowa Medical Journal and as the owner of an advertising list. The State Society merely decided to establish a journal of its own and felt quite willing to deal generously with Dr. Dorr and I am very sure that Dr. Dorr himself is satisfied. The Board of Trustees at its meeting in Des Moines to carry out the instructions of the House of Delegates met with Dr. Dorr in the most friendly manner and greetings of a most cordial nature were exchanged.

We should not be called upon to write this if it were not for apparent misunderstanding as to the relations of the two state journals to the State Society and their relation to each other.

The 1912 Session.

The meeting of the Committee on Scientific Work at Davenport, Oct. 10th, resulted in dividing the general work of the 1912 session of the State Society into two sections, medical and surgical—the section on eye, ear, nose, and throat remains as a distinct section as formerly. Some details will be worked out by the committee later.

There are papers, purely surgical, others exclusively medical and some border line papers and could be placed in either the surgical or medical sections without doing violence to the subject. The committee will insist on a short abstract of all papers to be forwarded to secretary Treynor not later than March 1st. By means of the abstracts it will be possible to assign all border line papers to the proper section. We have a forceful man for president this year, and any man who accepts a place will not be happy unless he is prompt and does the very best in every particuar.

The 1912 session is sure to be one of the most interesting in the history of the society. Strong men will co-operate with the committee directing the scientific work, Dr. F. A. Ely, Chairman, Section on Medicine; Dr. H. B. Jennings, Chairman, Section on Surgery; Dr. J. F. H. Sugg, Oration on Medicine; Dr. A. M. Pond, Oration on Surgery.

We desire to impress on the minds of those who received invitations to read papers, the importance of responding promptly, work out the plan of their papers deliberately and make as good an abstract as possible and forward it to Dr. Treynor as early as Feb. 15th, so that the preliminary program may go into the March number of the Journal. We contemplate holding back the April number of

the Journal until the latter part of the month, for the purpose of furnishing members the latest details of the meeting.

We trust that every county society will see to it that the list of delegates is made up in time to be published in the April number of the Journal; that alternates be appointed and that both delegates and alternates be provided with credentials so that the House of Delegates may be promptly organized and every county society be represented.

It is perhaps early to present this matter but it seems an opportune moment to urge upon the profession of Iowa that the state meeting is a great and important one and well worth the earnest co-operation of the entire profession.

Division of Fees.

Pearson's for September contains an article on Medical Ethics, which does not contain much comfort for the Profession. It must be confessed that the article is replete with facts that are incontrovertible, and in this confession we acknowledge the deplorable condition of the profession of medicine and surgery.

The growing commercialism in the practice is as humiliating to the true physicians, as it is unjust to the competent specialist, and to the patient.

The practice of the division of fees as conducted today is absolutely indefensible and few there are who pretend to defend it, hence, secrecy is the order of the day. That every one who performs any service for another should be remunerated according to his deserts is an old and tried maxim. Many high minded specialists have never surrendered, but have suffered for their temerity, unskilled persons have profited immensely by reason of the stand taken by their superiors, and incidentally the patients have not been benefitted. The doctor who sells his clients, sells to the highest bidder regardless of the interest of his patient.

Many specialists have what they call an organization, namely, doctors and nurses who have become to all intents and purposes drummers for certain surgeons who pay fifty percent or more in order to secure the patients. Five or six years ago the president of a State Society in his annual address, said, "that the divisions of fees did not originate in this state, but that the members of his society had taken to it, like the North American Indian to fire water and the results would be the same," so far the results are not apparent, and probably never will be along the lines he had in mind. Hence the publicity method is a doubtful one. The reading public are already in possession of the facts, but do not protest, at least in a way to make thier influence felt. The remainder of the people (those who do not keep abreast the times) cannot be reached by any amount of publicity, therefore, a more effective remedy must

be devised, and it must originate with the profession. It must have back of it the strongest advocates in the Medical Profession, aided by legislative enactments, statutory provisions authorizing boards of medical examiners to annul certificates upon reasonable proof, will prove more effective than any other method, this should apply to both parties to the transaction. Such boards already have this power in certain cases, for instance where the holder has been convicted of certain offenses etc. To grant further and additional powers, would be only an extension of the principle involved.

The effectiveness of the remedy would not be long in doubt. An example or two in each state would be ample. A statute of this kind would not depend upon the slow processes of the courts for enforcements, and would be entirely in the hands of the profession. Another and perhaps effective in a way, would be for those who do not buy their business, to go directly to the people by means of the public press, constantly keeping the matter before them. These fee splitters seem to control hospitals in the same way, patients being frequently switched from other men to them. Nurses are paid for telling other doctors patients that Dr. Fee Splitter does so much operating, that he can afford to do it cheaper than anyone else.

They are also used for the purpose of instructing country doctors to the effect, that Dr. Fee Splitter would like to do their surgery for them, and if they will send it in, they can charge the victim whatever they please and keep nearly all of it, oh! say, all but twenty-five dollars. Some hospitals have another stunt or two that they pull off daily viz., the office bulletin board. Dr. Fee Splitter is bulletined daily whether he is in town or not, or he is bulletined ahead for certain hours when he has no patients, so if he should have one he has the pull regardless of others. Others do well if they are bulletined for one-third of their operations. Great is the bulletin board. The only attempt made by the Iowa Legislature to put a stop to such iniquitous practices is appended. It will be seen that is of a general character, and is a dead one if there ever was one.

Section 5028-n. Accepting or giving tips or gratuities. It shall be unlawful for any agent, representative or employe, officer or any agent of a private corporation, or a public officer, acting in behalf of a principal in any business transaction, to receive, for his own use, directly or indirectly any gift, commission, discount, bonus or gratuity connected with, relating to or growing out of such business transaction; and it shall be likewise unlawful for any person, whether acting in his own behalf or in behalf of any co-partnership, association or corporation, to offer, promise or give directly or indirectly any such gift, commission, discount, bonus or gratuity. Any person violating the provisions of this act or any of them shall be guilty of misdemeanor, and upon conviction thereof shall be punished by a fine of not less than twenty-five dollars (\$25), nor more than

five hundred dollars (\$500), or by imprisonment in the county jail for not more than one year, or by both such fine and imprisonment (32 G., ch. 183, section 1.)

Lewis Schooler.

Medical Defence.

The Indiana State Medical Society at its 1911 session, adopted the Medical Defense measure which has been in operation in Iowa for the past four years. Some of the features are interesting. We are quite sure the committee will be a busy one if some of the regulations are carried out, for instance, it provided that this committee shall have full authority governing all matters pertaining to the Medical Defense features of the Association; with power to employ counsel, summon and employ expert witnesses and incur such other expenses as in the judgement of the Committee may be necessary in the defense of members against whom suits may be brought; provided always that the total expenditure in any single suit shall not exceed 25 per cent of the fund available at the time suit is incurred. It is difficult to see how a defense can be efficient if the expenditure of money is restricted by rule. We believe after four years experience that it is much better to leave all the details in the management to an attorney appointed by the Committee on account of his special skill and experience in this kind of work and who becomes the attorney for the Society. We have also found it better to allow our attorney to employ local assistants who work under his instructions, and in that way we avoid legal complications which in our earlier experience was expensive and troublesome. In other words, we have adopted the course which corporations have found to work best; of having an authorized attorney in harmony with the Defense Committee. The Committee reviews the medical features and advise our attorney as to the merits of the case from a medical point of view and the attorney attends personally to the legal features. We have found county society cooperation to be of questionable value and have abandoned it. We have found that the Committee must look up its evidence in a way which seems to them best so as to get all the medical facts and advise accordingly.

In the Pennsylvania Medical Journal of Sept., 1911, Dr. John H. Rhein, Professor of Diseases of the Mind and Nervous System, under the head of "Post Operative Psychosis" says:

"In studying the effect of an operation upon the mental condition, numerous etiological factors are brought into consideration, first of all, the hereditary predisposition of the individual operated upon, his habits as to alcohol and drugs, and his physical, mental and moral qualities, the moral attitude assumed upon entering upon the operation, effect of anesthetics, dressings and complications of the

operation, such as infections, all deserve serious consideration. All of these elements probably have a greater bearing on the occurrence of abnormal states after operation than the character of the operation itself. It is generally agreed I believe, at present, that the character of the operation in itself has little or no influence in inducing a possible operative psychosis."

Sacro-Iliac Relaxation.

Recently a condition known as 'sacro-iliac relaxation', 'sacro-iliac strain', 'sacro-iliac dislocation', has engaged the attention of surgeons, particularly orthopedic surgeons. If what these gentlemen contend for is true, we must revise our notions in relation to pelvic pain, back ache, sciatica, etc. It is never entirely safe to make a general denial of the truth of any proposition in medicine or surgery until the subject is carefully studied, even if at first sight the contention seems at least extreme.

Dr. Goldthwait, a distinguished orthopedic surgeon of Boston, was the first to systematize the study of this condition in a paper published by Doctors Goldthwait and Osgood in 1904. Dr. Pitfield of Philadelphia in a paper published in the June, 1911 number of 'American Journal of Medical Sciences' has enumerated some of the causes of 'sacro-iliac strain and relaxation', 'auto riding or travel in the cars, or on horse back, or from lying in a hammock, or soft beds with weak springs; or a relaxation may follow a violent trauma directly applied to the back, or strain during football or wrestling, or from tripping or slipping, or lifting.' 'Goldthwait mentions the case of a woman who was invalided for 35 years after lifting a basket of peaches high up in the air. She felt something slip in her back and was bed ridden for years after.' Slouching in chairs is also a common cause as are incorrect methods of walking. I have seen three hard labors followed by this trouble. Sudden slipping while rising from bed, chairs, or out of a bath tub has been followed by an acute luxation of this joint. It may occur in slender, weak women and children; it may affect the athlete with superb musculature.

"The Common Symptoms" are given as follows by Dr. Roland O. Meisenbach of Buffalo, N. Y., Clinical Instructor in Orthopedic Surgery, University of Buffalo, in the Journal 'Surgery, Gynecology and Obstetrics', May, 1911. They 'may vary from the most sharp and lancinating pain so that the patient can scarcely move without screaming, to a very mild troublesome backache, more frequently intermittent subjective symptoms especially in those types of long standing. Almost all of the sciaticas are due to sacro-iliac relaxation. Many of the cases of backache, lumbago, occipital headache, sciatica and the like, may be traced back to strain of the sacro-iliac joints.'

"It is surprising to see how many of these cases are connected with chronic uterine and pelvic congestion or disease which has not been relieved by gynecological interference and it is not to be wondered at that many of these cases become neurasthenic and semi-invalid when a continued sacro-iliac irritation exists. We must not forget in considering the gynecological aspect of the malady, the close proximity of the inner aspect of the sacro-iliac joints to the pelvic viscera, as for instance, the posterior cul-de-sac, Fallopian tubes, uterus, etc. and that the many affections interfering with these may also directly or indirectly influence the sacro-iliac joints, that is, causing a congestion at first and later a relaxation of the ligaments with a consequent subluxation of the sacro-iliac joints and vica versa; also that the minute network of nerve structures passing through or near the sacrum may give rise to symptoms of hyperesthesia which may at first be entirely misleading as to their origin."

Under the traumatic type of sacro-iliac lesions, Dr. Meisenbach states that 'although normally in both the male and the female the pelvic joints are firmly held together, it is surprising to see how frequently and how quickly they become involved either by direct trauma or by indirect muscular action. This class of cases usually present unilateral lesion but they may also be bilateral. The symptoms and lesions in this class may be severe or mild, depending upon the amount of trauma, but not necessarily upon the severity of the cause.'

Dr. Meisenbach regards nearly every case of persistent backache as being produced by strain or subluxation of the sacro-iliac joints, walking, lifting, riding on railway trains or automobile. He also regards the backaches following operations as due to strain of the sacro-iliac joints from lying on the operating table.

The paper is exhaustive and is interesting, but must be regarded, we think, at present at least, as somewhat speculative. It does not seem possible to demonstrate the truth of the views of Dr. Goldthwait and his followers. Dr. Meisenbach frankly acknowledges that no X-Ray has been published showing a dislocated or strained sacro-iliac synchondrosis although he claims that by means of the stereoscopic X-Ray many cases show an open joint to a greater or less extent.

The treatment recommended is rest in bed for some time until the soft parts have united. The mild or ambulatory cases can generally be held firmly by a properly applied plaster jacket reaching well down over the hips and holding the spine in a hyperextended position, or by a brace attached to a corset.

The extreme views presented may be accounted for as the product of a natural enthusiasm which often goes with special studies. We have been looking for these cases since reading Dr. Goldthwait's paper and have found a few which we believe were

traumatic sacro-iliac strains, but have not been able to go beyond this up to the present time. We recently had the opportunity to examine a patient who had been treated in Dr. Goldthwait's office for sacro-iliac relaxation and who was trying to wear a modified Osgood brace fitted by one of Dr. Goldthwait's assistants. The patient was suffering from pain and tenderness in the region of the appendix and stomach symptoms, rather characteristic of chronic appendicitis. During the past two or three years she had several exacerbations of these symptoms. There was also a marked enlargement of the right ovary which was decidedly painful on pressure. The pressure of the brace on those painful parts caused so much distress that she was able to wear it only for short periods at a time. She was greatly relieved when she was advised to discontinue it. She had for some time been afflicted with a troublesome backache and a diagnosis of sacro-iliac relaxation had been made. Granting that this diagnosis was correct, it was also apparent that some operative abdominal work was necessary before the sacro-iliac condition could be effectively treated. It is unquestionably true that many useless operations on the uterus, ovaries and appendix, have been made for cases of distressing backache which were due to causes not fully appreciated by the operator and it may be worth while to carefully consider the claims set forth in the papers of Drs. Goldthwait, Meisenbach, Pitfield, Evans and others.

MEDICINE IN IOWA FROM ITS EARLY SETTLEMENT TO 1876.

D. S. FAIRCHILD, M. D., Clinton, Iowa.

(Continued from page 223, Oct. Number.)

Green County.

The history of medicine in this country is soon told. The data is furnished by Dr. W. S. Schermerhorn who was born Oct. 8, 1833, at Deerfield, N. Y. Graduated from Albany Medical College in 1852, located in Jefferson in 1871, and died in 1892.

Dr. Schermerhorn was a devoted practitioner of medicine. No thought was given to worldly ambition or the accumulation of money. His life was a constant sacrifice to the welfare of his patients and devotion to his family. Dr. Schermerhorn was a consistent Christian gentleman; loved and esteemed by all who knew him.

In 1875, the population was about 8,000. The number of practicing physicians, 14:—graduates, 6; non-graduates, 8; regulars, 10; eclectic, 3; homeopaths, 1.

There is no history of epidemic diseases having prevailed in Green County (1875).

Jasper County.

Dr. Engle of Newton furnished the data for this county.

"Pseudo-membranous croup" has prevailed quite extensively in this county, proving extremely fatal. Typhoid fever prevailed as an epidemic in the summer of 1875, "most cases being manageable."

Perhaps the only change effected by the cultivation of the soil has been to lessen the number of cases of intermittent fever.

The number of practicing physicians is 27 of which 7 have diplomas and 20 have no diplomas.

Classification:—regulars, 22, of which 6 are graduates; homeopaths, 2, without diplomas; eclectics, 3, of which one is a graduate.

Surgical Operations.

Ovariectomy, Dr. W. F. Peck, Recovery.

Senile Cataract, Prof. Frothingham, Successful.

Amputation at shoulder joint, Dr. Engle, Recovery.

Howard County.

A medical society called the North Iowa Medical Society embracing the Counties of Fayette, Allamakee, Clayton, Howard and Winneshiek, was organized in McGregor June 22nd, 1859, with Dr. Andros, president, and Dr. H. C. Martin secretary. The present membership (1875), 30. H. H. Clark, M. D., of McGregor, president; D. W. Chase, M. D., Elkader, vice-president, and L. A. Merriam, M. D., Cresco, secretary.

Among pioneer physicians may be mentioned Dr. J. J. Clemmer of New Oregon and Dr. J. W. Reed of Lima Springs. Both of these gentlemen came to Howard county in 1855.

An epidemic of diphtheria prevailed in this county in 1862-63 of a very severe type, many cases proving fatal.

The number of practicing physicians in Howard county (1875) 12, of which 6 have diplomas and 6 have no diplomas.

Classification:—Males—regulars, 5, all graduates; homeopaths, 1, non-graduate; eclectics, 1, graduate; nondescript, 4, non-graduates; female—homeopaths, 1.

Capital Operations.

1858—Amputation of leg, Dr. J. J. Clemmer, Recovery

1863—Amputation of right arm—gun shot wound—Dr. Reed, Recovery.

1866—Amputation left arm, Dr. J. W. Reed, Recovery.

1870—Amputation right forearm—gun shot wound—Dr. J. W. Reed, Recovery.

1873—Amputation left forearm, Dr. J. W. Reed, Recovery.

1875—Amputation right thigh—cancerous disease of tibia—Dr. J. W. Reed, Recovery.

Hardin County.

In 1875, Harding county had a medical society with Dr. B. E. Dodson, president; Dr. Cosgrove, vice-president. and Dr. E. H. King, secretary.

An epidemic of malignant scarlatina prevailed in Eldora in the spring of 1875. Successful treatment; tonics, stimulants, and antiseptics.

Local authorities have done nothing to supply the lack of state legislation relating to medicine.

The number of practicing physicians 30.

Graduates—regulars, 9.

Graduates—homeopaths, 2.

Graduates—eclectics, 1.

Number who have no diplomas, 18.

The data for Hardin county was furnished by Dr. B. E. Dodson

Dr. Harvey W. Wiley.

It is a gratifying condition to have to record that the yellow streak in the Department of Agriculture could not be traced to the doors of Dr. Wiley. He has been a source of serious trouble and a very great inconvenience to those who would market impure and adulterated food stuffs. All too seldom do such men as Dr. Wiley attain to places of honor and power. They are generally side tracked early.

It appears, for good and sufficient reasons to those vitally interested (financially), that the progressive work of the Bureau of Chemistry has been considerably hampered. Certain persons have shown no hesitancy in emasculating not only the reports of Dr. Wiley but have even tampered with Court decisions.

Dr. Wiley is not a muckraker—his business has not been for the sake of making sensations:—he has exposed corruption as a necessary act in the promotion of the general welfare.

But the emasculating committee went too fast. It trumped up charges and was caught in its own trap, and the end is not yet.

It is cause for congratulation to see the unanimity with which the press has arisen to the defense of Dr. Wiley, and through him to purity in all things. Dr. Wiley stands for honesty in public dealings.

The same organizations and individuals who sought Dr. Wiley's overthrow protest against the establishment of a Department of Public Health and decry the medical profession and the official organization—the A. M. A.—as a trust. A full and complete investigation of the American Medical Association is welcomed and the disclosures will be the same as in the case of Dr. Wiley.

The time for writing the obituary of either Dr. Wiley or the American Medical Association is not yet.

President Taft has not as yet given his decision in the case of the Department of Agriculture. When government officials need to descend to such trumped up charges to oust a public servant who is not in harmony with their attached interests, it is high time for a most thorough house cleaning.

All the more reason for the early establishment of the Department of Public Health.

The State Meeting.

The Program Committee of the Iowa State Medical Society, consisting of Drs. W. B. Small, V. L. Treynor, and L. W. Littig, met in Davenport on

Otober the 10th. There will be but three sections at the next meeting of the State Society, the Section on Ophthalmology and Otology to meet independantly as during the past few years, medical and surgical papers or groups of papers to alternate at the general meeting.

The Committee was moved to reduce the number of sections by the practice in the surrounding states: Missouri has three sections, Medical, Surgical, and Eye and Ear, the first two meetings simultaneously on two afternoons, and in joint meeting the rest of the time; Kansas has no sections and no section chairmen; Nebraska has two sections, Medical and Surgical, meeting simultaneously; South Dakota, Minnesota, and Wisconsin, have no sections and no section chairmen; Illinois has but two sections, Medical and Surgical.

The last mentioned state, Illinois, has experimented with different methods, simultaneous section work, a medical day and a surgical day, closing with a conjoint day, but it is believed that the best results have been obtained by having two sections, alternating medical and surgical papers. The interest is better and continues to the end of the meeting. The Illinois plan is the one favored by the Program Committee of the Iowa State Medical Society, with the exception of the section on Eye and Ear. Some years ago the members of that section indicated a preference to meet independently, and it was thought best not to change that arrangement.

State University.

We are publishing in this number of the Journal, a letter from President John G. Bowman of the State University of Iowa in relation to the attitude of the University and of the Board of Education, towards the practice of fee splitting on the part of the medical faculty. We have assumed that this applies to all forms of commission giving, whether it be in the form of a secret payment of an excessive assistant's fee or the doing of an operation for a stated secret fee and allowing the attending physician to charge an additional sum as he may see fit or the payment of a percentage of the fee collected. Of these methods, the last is the least objectionable because it is an open method of graft and it is just what it professes to be.

We are sure that the profession will be grateful to President Bowman for his frank condemnation of the practice of fee splitting. There is no question but that President Bowman means just what he says. His work on the Carnegie Foundation has made him familiar with the evils of this practice and his high sense of honor and his duty to the University will be a sufficient incentive to correct the evil practices he may find in the methods of members of the medical faculty. The statement that the Iowa City methods are no worse than in other places may be true but we all feel that the University itself should stand for high ideals and that its faculty should be free from any suspicion of graft. We feel that it is the duty of the profession to stand by the President Bowman and co-operate with him in making the Medical Department an influence for good and the elevating of the standards of the profession of Iowa.

October 13, 1911.

My Dear Sir:—

In the columns of the Journal of the Iowa State Medical Society recently appeared some criticism of the Medical College of the State University. Professors of the Medical College are charged with the

splitting of fees. In other words, they are charged with the dividing of the fees which they have received in some cases with the physicians who bring the cases to them. After some effort I have not been able to find the authority for the report on which your criticism is based.

So vital, however, is the question raised by the criticism that we cannot allow it to pass unnoticed. The University must be above suspicion of bad ethics, and the practice of splitting fees is thoroughly vicious. From the Medical College should radiate only the highest ideas of the medical profession and I am glad to say that the medical faculty itself, the Iowa State Board of Education, and the administration of the University by recent action stand firm on the issue to this effect: Non-professional conduct on the part of any officer of the college will not be tolerated for a day. The highest professional practice in the medical profession shall not be clouded here by any technicalities whatsoever. If the practice of the division of fees ever existed at the University, either in fact or in semblance of fact, that practice is now at an end.

I am,

Very sincerely yours,

John G. Bowman.

Dr. D. S. Fairchild, Editor, Journal of the Iowa State Medical Society,
Clinton, Iowa.

Oct. 14, 1911.

John G. Bowman,
President, State University of Iowa,
Iowa City, Iowa.

Dear Sir:—

I have received your letter of Oct. 13th in relation to a criticism which appears in the columns of the September number of the Journal of the Iowa State Medical Society. This criticism was not made with the intent of injuring the University or discrediting the Medical Department in any way but simply to call attention to a condition that has been well known to exist by the profession in Iowa for a number of years. It may not be known to you but there has been a suspicion of wrong doing in the Medical Department that has seriously affected its good name throughout the entire West.

There is an abundance of evidence to show that some of the most prominent members of the clinical faculty have been engaged in the business of dividing fees with the profession. This has been a humiliation to the friends of the Medical Department of the State University—it may be assumed that all the doctors in Iowa are friends of the University. This is a delicate matter and the Journal would not have taken it up had it not been for the parting exhortation of the retiring president of the University to “get rid of the taint of commercialism.” The same paper published in Iowa City that printed this exhortation, continued by also printing an interview given out by “one prominent physician and surgeon of Iowa City and of the University.” You can readily see that a matter of this kind could not be allowed to go unnoticed, and this was occasion for the editorial remarks referred to.

The practice of division of fees, both by giving a commission on the part of the specialist and the demanding of a part of the fee by the general practitioner is looked upon by the better elements of the profession as absolutely wrong and thoroughly vicious. It is stated generally by the leaders in the profession outside that Iowa stands first in the fee splitting business and Wisconsin next. There are certain spots that have been marked out as dark spots. This has been so bad all over the country

that at the last meeting of the A. M. A., a special council was organized for the purpose of investigating this very important question and to devise means if possible, to stop it before it gets to such a point as to seriously impair the good name of the profession in the eyes of the general public. This council intends to begin its investigation by looking into the condition of the medical schools and if it is found that members of the faculty are guilty of this practice or there is a suspicion of guilt, a recommendation will be made to the educational board that these men be dropped from the faculty, and if the college persist in continuing them, the council will use its influence to have school declared not "in good standing." Some of the leading members of the faculty in the Medical Department of the State University also in the Medical Department of Drake, are under the graves suspicion.

The responsibility of a private school is not so great as that of the State University, and I am sure the profession in Iowa would be gratified to see a liberal policy adopted by the state towards the University, such as would enable them to secure high grade men and who would be entirely beyond suspicion.

The denial that certain doctors do not give commissions will not affect the matter in the least. The suspicion is so strongly grounded that it cannot be removed except by the most heroic efforts.

I am very glad to have received your letter and I can assure you that we will be glad to publish anything you may have to say upon this matter, but I can assure you also that to deny that members of the medical faculty have divided fees would have no influence, and be looked upon as an absurdity. What you have stated in your letter is very much to the point because it is an emphatic statement of the future policy of the University, and I feel sure will be accepted by the profession at large. If you will permit, I will publish this letter in the November issue of the Journal.

Yours truly,

Dr. D. S. Fairchild.

Society News.

Monroe County Medical Society has sent out programs for the next two months—for Nov. 16:—Burke Powell—"A brief on human embryology"; T. E. Gutch—"Pancreas, diseases and diagnosis"; M. T. Roirdan—"An essay"; S. T. Gray—"Whooping cough." For December 21,—T. R. Jackson—"1911 in medicine and surgery"; C. C. Fowler—"Physiology of stomach and small intestine"; A. W. Pepper—"An essay on pain"; R. P. Miller—"Gastric and urinary examination."

Dallas-Guthrie Society met in Panora Oct. 19. The program included papers on "Treatment of Cardio-Vascular Diseases" by W. L. Bierring; "Acute Articular Rheumatism" by E. L. Bower; "Treatment of Malignant Growths"—non-surgical—by E. H. Lockwood, surgical by B. H. Sherman. Election of officers followed the program.

The October meeting of the Blackhawk County Medical Society was held in the parlors of the Irving hotel, Waterloo, Iowa, at 8 o'clock p. m., Tuesday, October 10th, 1911.

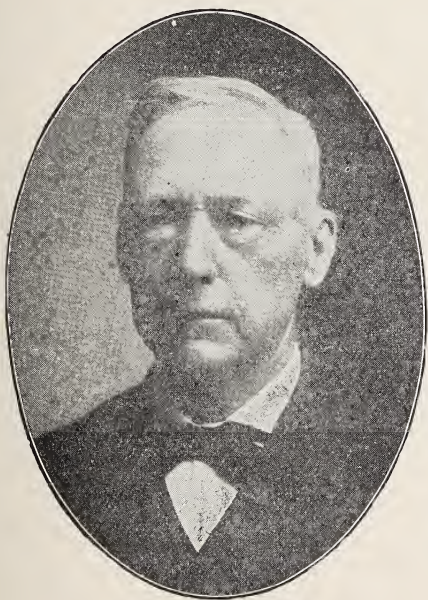
Dr. R. W. Whiteis of the Iowa State University delivered a lecture on "Surgical Emergencies in Obstetrical Practice."

Following Dr. Whiteis' lecture there was a business session.

Semi-Centennial for Dr. Edward Hornibrook.

On the evening of October 30th, at the Lewis Hotel, occurred one of the most pleasant surprises of the season when physicians of the state, in response to invitations sent out by Dr. Freeman Hornibrook, assembled at 9:00 P. M. to do honor to his father, Dr. Edward Hornibrook, who has completed fifty years in active medical practice.

The surprise on Dr. Hornibrook was complete, he being a guest of Dr. Voldeng at a 6 o'clock dinner at the State Hospital, where by crafty management he was detained and kept in ignorance of coming proceedings, until the hour appointed for his reception at the Hotel. On his arrival there, the Doctor was escorted to the dining room and given the seat of honor while about him gathered medical men from various parts of the state. A most delicious feast was then served, consisting of the following menu:—



New York Counts
Celery Hearts Waferettes

Essence of Beef in Cups
Salted Almonds Olives

Fillets of Lake Superior Trout
Pommes Saratoga

Roast Young Turkey,
Chestnut Dressing
Potato Rosettes Cranberry Marmalade

Tomato en Surprise

Fancy Ice Cream Assorted Cake
English Plum Pudding,
Sauce Supreme

Salted Wafers American Cheese
Demi Tasse

Mint Patties

The feeling of good fellowship prevailed everywhere, and needed but the well chosen remarks of the Toastmaster, Dr. G. G. Cottam, of Sioux Falls, South Dakota, at the conclusion of the banquet, to centralize the spirit of the occasion upon the honored guest.

Dr. F. H. Hornibrook responded to the toast, "Why We Are Here," Dr. J. W. Kime of Ft. Dodge, to "Bugs," Dr. George Park of Sioux City, to "Reflections, Without a Head Mirror," Dr. E. E. Dunkelberg of Waterloo to the toast "Unter den Linden," making some very pleasing remarks on the subject of country practitioners, and closing his toast by reading the Country Doctor from a book of Will Carlton's poems. Dr. R. L. Cleaves, of Cherokee, responded to the toast—"My Neighbor." A congratulatory letter from Dr. C. F. Wahrer of Ft. Madison was read, also one from Dr. A. G. Field of Des Moines, the Doctors being unable to be present.

Toasts were also responded to by Rev. Father Saunders of Ft. Dodge—"A Little Leaven"; by Dr. M. N. Voldeng—"A few Whiffs from the big Smokestack on the Hill"; Dr. A. M. Pond—"From the River". Dr.

P. B. Cleaves spoke as president of the Cherokee county society. Dr. Hornibrook fittingly responded as to "How it feels."

Biographical Sketch.

Edward Hornibrook was born near Merickville, Grenville County, Ontario on the 29th day of October, 1838. He attended the public schools in several parts of the county for a few months each year, spending the remaining time on his father's farm. At the age of fourteen years he refused to remain on the farm any longer or to fit himself for the study of law or the divinity as his father so wished him to do. The medical field was alluring to his youthful mind, and although he could have entered upon the studies for any other profession at his father's expense, or even have had a farm by the time he was of age, he refused all such offers and resolutely set about making his own way in the world. In order to obtain money to defray the expenses of a collegiate course, he taught school, pursuing at the same time the preliminary branches of medical science. When he matriculated at University College, Ontario the time spent in hard study during his teaching years had its reward for he received class honors in mathematics, natural history and chemistry. In 1861, he graduated from the medical department of Victoria College, and for the following eighteen years pursued the practice of medicine at Mitchell, Ontario, where he was said to have had the largest practice in the province.

In all his career he has been adverse to public office of any kind, or to any vocation which would distract his attention from the duties of his profession. Only once was he induced to run for any elective office, when in 1877, under pressure of his friends and a sense of public duty, he ran for a seat in the Dominion Parliament and was defeated by seventy votes in constituency which had been noted for giving majorities of 700 to 1000 to the candidate of the opposing party. He has often expressed gratification for his defeat, as it left him free to study and practice the profession which he loved.

In 1879 his health began to fail on account of his strenuous work, and he came to Iowa when he resented from work for a year. Since this time he has been in constant active practice at Cherokee. For many years he has been an active member of the Iowa State Medical Society, serving at various times on most of the important committees, as chairman of its several sections, as vice-president, and finally president of the association in 1897. He also was a member of the Medical Council from its inception until a year ago, when he voluntarily resigned. He has also been active in local medical societies, having served as president of the Sioux Valley Medical Society and of the Cherokee County Medical Society.

Under the administration of Governor Boies, he accepted the appointment of Trustee of the Hospital for Insane at Independence, being re-elected by the legislature, and held that position until the trustees were superseded by the Board of Control.

For several years he taught Gynecology and was Dean of the faculty in the Sioux City College of Medicine, although he never made any pretext of being a specialist, but practiced in all branches of his profession, striving to keep abreast of the times in all. He has had and now has a very extensive consultation practice extending over a very wide district, and the esteem in which he is held by the physicians who have at times sought his advice was shown by the number who attended the celebration of the fiftieth anniversary of his practice, and the seventy-third anniversary of his natal day, and by the telegrams and letters of congratula-

tion which were received from many who were not able to be present. The doctor is still engaged in active work, having had three important consultations, and difficult surgical operation to perform on the day of the contemplated celebration, of which he was kept in profound ignorance until the hour appointed for his reception at the hotel.

Sixty-three physicians met at the banquet to honor Dr. Hornibrook.

Changes in the Instructional Staff in the College of Medicine, Drake University.

Dr. H. A. Minassian has been appointed Professor of Gynecology, with a clinical service at Mercy Hospital.

Dr. Daniel J. Glomset, who succeeds Dr. A. R. Robertson as Professor of Pathology and Bacteriology, has taken up the duties of his position. Doctor Glomset is a graduate of the University of Chicago and Rush Medical College. During the past two years he has been associated with Professor Ludwig Hektoen in the Memorial Institute for Infectious Diseases, Chicago.

Dr. Robertson sailed for Europe on September second to spend the winter in the larger medical centers of the continent, preparatory to his taking up special work in clinical pathology and internal medicine in Victoria, B. C. Doctor Robertson was a great help in establishing the new laboratories of pathology and bacteriology, and made a host of friends during his year's stay in Iowa.

Dr. Paul E. Lineback has been appointed Instructor in Anatomy.

Dr. John H. Peck has been appointed Director of the Drake University Dispensary.

Dr. A. S. Beggs is acting as Assistant to Professor Minot at Harvard Medical School in the Department of Embryology during the fall term, and will return to Drake to begin his teaching in Embryology and Histology after January 1st, 1912.

Dr. Thomas A. Burcham has been placed in charge of the Radiographic Department of Iowa Methodist Hospital.

Dr. Charles Burnside, Assistant in Clinical Medicine has been granted a leave of absence, and will spend the winter in Silver City, New Mexico, in order to recuperate after a recent severe illness. Dr. J. F. Strawn, recently an associate of Dr. B. W. Sippy, Presbyterian Hospital, Chicago, has been appointed in charge of his work.

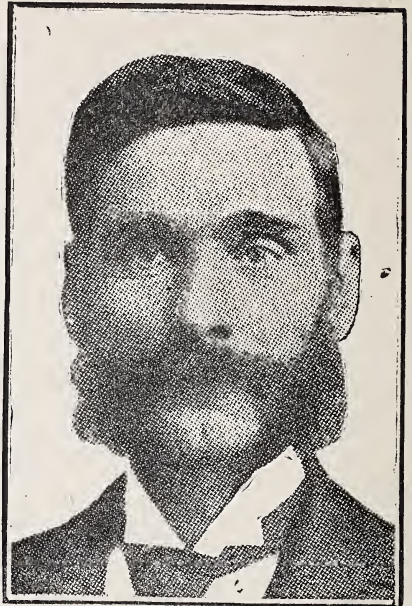
A pathological Department has been established in the Iowa Methodist Hospital, consisting of a suite of six rooms—autopsy room, museum, technical room, pathologic laboratory, bacteriologic laboratory, and incubator room; the department will be in charge of Dr. E. J. Harnagal, resident pathologist, and under the direction of Doctor Glomset, professor of pathology and bacteriology.

Arrangements are being made to equip an Orthopaedic Institute in connection with the Methodist Hospital to be under the charge of Dr. A. Steindler, Professor of Orthopedic Surgery.

The new laboratory building, containing the departments of Physiology, Physiologic Chemistry, Histology and Anatomy, has been completed, and with the present session all the didactic and laboratory courses of the four years will be conducted in the building on Centre Street.

Memoir.

Dr. Daniel Webster Crouse was born in Chester County, Pennsylvania, Nov. 5th, 1885. When eleven years old he moved with his parents to Carrol County, Illinois, where they lived on a farm. His education began in the country schools and was continued in Mount Carroll Seminary. In 1868 he was graduated from the scientific course in the University of Michigan. The same year he took his first course of lectures in the College of Physicians and Surgeons in New York City and graduated the following year at Long Island College Hospital, Brooklyn, N. Y., with the class of 1869. He practiced a few months at Morseville, Ill., but in the fall of 1869 moved to



Waterloo, where he was a very active practitioner until five years ago when he moved to Citronelle, Alabama, in search of relief from chronic bronchitis. He was happy with his family and was comfortably well in the Southland until a failing heart marked his end of time, on Thursday, October the 12th.

He had been president of the Waterloo Medical, Blackhawk County Medical, Austin Flint-Cedar Valley, and Iowa State Medical Societies, and a number of years a member of the Council of the A. M. A. The sincerity of his interest in medical societies it attested by the fact that as president he continued to be a regular attendant.

In no other effort was Doctor Crouse's extreme interest in medicine and surgery more evident than in his untiring efforts in securing and building the Presbyterian Synodical Hospital of Waterloo. If untiring effort and thoughtful manipulations, coupled with liberal donation, shall receive their due, then this hospital stands as a monument to his memory.

In the death of this splendid man, scores of physicians mourn as in the death of an older brother. As a friend, he was constant and loyal; as an adviser honest and farseeing; as a practitioner, painstaking and alert; as a competitor, honorable and true. By no single virtue will his memory be perpetuated, for he excelled in many. With an ardor rare, he hated vice and loved virtue. To know him well, was to know in advance his position on any moral issue.

To the young doctors, Doctor Crouse was always a special friend. In their successes he gloried; in their disappointments, he sympathized; sincere in both. These were the characteristics that made him a popular consultant in many counties. While we mourn his loss we rejoice in his memory.

He was buried at Waterloo, Oct. 16th, where the beautiful floral offerings and the large number of friends in attendance at the rites, fittingly bespoke the high esteem in which he was held at his former home.

T. U. McManus.

Dr. Ferguson Dead.

Dr. Alexander Hugh Ferguson, formerly president of the Chicago Medical Society and a surgeon known throughout the United States, Canada and Europe, died yesterday morning at his residence, 4619 Grand boulevard, of diabetes.

He was born in Ontario, Canada, Feb. 27, 1853. He was graduated from Rockford Academy and Manitoba College. Later he became instructor in the Manitoba College.

In 1881 he was graduated from the medical college of Trinity University at Toronto, with the honor of M. B. and later in the same year was an honor graduate, M. D., C. M., of the same university.

Following his graduation from Trinity he visited American hospitals and also those of London, Edinburgh, Glasgow and Berlin. In 1889 he took a course in Koch's laboratory in Berlin.

He married Sarah Jane Thomas in 1882. His first practice was in Buffalo, but after a few months there he went to Winnipeg where he practiced until 1894. He took an active part in founding the Manitoba Medical College, acting as professor of physiology and history and also as professor of surgery. He was first president of the Manitoba branch of the British Medical Association, and a member of the provincial board of health.

At the time of his death he was professor of clinical surgery in the College of Physicians and Surgeons in the medical college of the Illinois State University.

He was elected professor of surgery in the Chicago Post-Graduate Medical School and Hospital in 1893 and assumed his duties in 1894. He was also surgeon to the Cook County hospital for the insane. He was appointed first lieutenant, U. S. A. Medical Reserve Corps, this year.

He devised many operations that were acknowledged by surgeons the world over.

He was decorated commander of the Order of Christ by the late King Carlos of Portugal in 1906 for his excellence in surgery.

He was a member of the British Medical Association, International Surgical Association, American Surgical Association, American Medical Association, State Medical Society, Chicago Gynecological Society and several others.

William Nelson Fry died at his home in Marcus, Cherokee County, Iowa, September 12th, 1911. Dr. Fry, the eldest son of William H. and Louise Whitman Fry, was born in Wells, N. Y., on Sept. 23, 1863. His education was received in a preparatory school in Putney, Vt., and at the Medical Department of the University at Burlington, Vermont. He also received a degree at Columbia University, New York City. He first practiced at Wells, N. Y., and was united in marriage in 1888 to Miss Clara Deming. The following year he came to Marcus, Iowa, where he has since practiced. Five children were born to this union, three of whom are now living. Mrs. Fry died in 1903. Dr. Fry's second marriage was in 1906, to Miss Caroline Goldsmith, of Springfield, Ill., who survives him.

Dr. Fry stood high in fraternal circles, being a member of the Knights Templar, Abu Bekr Temple of Shriners, T. S. Parvin Consistory, also of the Eastern Star, Odd Fellows, Rebekahs, and Knights of Pythias.

He served as Mayor of Marcus twice, and was president of the Board of Education at the time of his death.

On September 1st, Dr. Fry was stricken with apoplexy, and seemed to be making fair progress toward recovery, when a second attack brought about the untimely result.

His funeral was held at the home on Sept. 14th. The Cherokee County Medical Society was largely represented, and many physicians from the surrounding counties were present. The Honorary Pallbearers were Doctors R. L. Cleaves and M. N. Voldeng, of Cherokee; Naffziger, of Wayne, Neb.; Jastrum, of Remsen, Ia.; Raw, of Pierson, Ia.; Dudley, of Paullina, Ia.; Quinn, of Meriden, Ia.; and Knox of Marcus. The services were in charge of the Masons.

Dr. Fry practiced in Marcus for 21 years. Professionally, he was highly esteemed by the public and by his brother doctors, and personally his disposition was such as to add to the sunshine of the lives of those with whom he came in contact. His funeral was probably the largest ever held in the County, a tribute to high esteem in which he was held.

A called meeting of physicians was held at Calmar, Oct. 20, at which time steps were taken to organize a district society to be known as the Northeastern Iowa Medical Society. It composes the counties of Allamakee, Winneshiek, Clayton, Howard, Fayette and Chickasaw. The first meeting will be held at Calmar in June 1912, at which time a contribution will be adopted. The dues are \$1.00 a year. Dr. P. M. Jewell of Decorah is president; Dr. E. N. Johnson of Fredericksburg is vice-president; and Dr. W. C. Hess of Cresco is secretary and treasurer.

The profession of Burlington gave a complimentary dinner at the new Hotel Burlington on the evening of Oct. 16, in honor of Dr. H. A. Leipziger. The doctor has been a practitioner in Burlington for many years. He is now Vice President of the State Society. He leaves soon to spend a year in study in Europe. We are very glad to chronicle these joyous events. They show that fellow practitioners appreciate true worth.

The 37th meeting of the South Eastern Iowa Medical Society will meet in Washington Nov., 16. The program is intensely practical and merits a large attendance. The meeting and banquet will be held in the Commercial Club. Sessions will begin at 10 A. M., banquet at noon. The ladies' committee has arranged entertainment for visiting ladies. Immediately following the dinner, autos will take the visitors for a visit to the new county hospital which is nearing completion. Arrange to attend.

Lousia County Society met in Wapello Oct. 19. There was a good attendance. Dr. W. S. Grimes read a history of the society. This was very entertaining and will be published in the journal.

Dr. J. W. Pence read a paper on "Anesthetics" and Dr. J. H. Chittum one on "Obstacles to Prophylaxis". These papers were freely discussed.

Dr. Frank Hubbard was elected president and Dr. S. J. Lewis was reelected secretary. The society meets next at Columbus Junction in December.

The Van Buren County Society met in Keosauqua Oct. 19. The topic of the day was "Extra-gastric diseases of the abdomen, both medical and surgical." Clinic cases were presented. Dr. S. A. Spillman of Ottumwa, discussing the surgical and Dr. G. F. Jenkins of Keokuk, discussing the medical phases.

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OBSTETRICS AND NON-SURGICAL GYNECOLOGY.

OBSTETRIC AND GYNECOLOGIC REMINISCENCES*

A. B. BOWEN, M. D., Maquoketa, Iowa.

The obstetric art beyond any other branch of medicine appeals to the sympathies and to the most sacred instincts.

It has been asserted that "the obstetric practice of a people is indicative of their civilization, their culture and their morals."

Of all branches of the healing art, obstetrics is the most ancient taking us back to pre-historic times, before the dawn of science and civilization. Its practice was dominated by empiricism for many centuries.

It was woman's mission to care for her sister in distress. Her duties were empirical. No schools of midwifery were at her service. The medical man was called in complicating emergencies. Cephalic was the only recognized normal presentation for centuries. All abnormalities inspired an effort to convert to the normal, by cephalic version; the last resort was embryotomy which was the chief function of the medical man at that remote period, prior to the teaching of Hippocrates. Which formidable practice offered little hope for the patients.

The early history of the obstetric art is a compilation of traditions, shrouded in mysterious uncertainty; and despite the dim flickerings of the lamp of science, progressive spirits occasionally appeared on the professional horizon, even in the absence of anatomical knowledge; and with no surgical technique for a precedent, we are informed that Caesarean-section and other major operations were not unknown to the ancients.

Grecian law and religion prohibited all legal opportunity for scientific advancement in medicine. And despite the crude tech-

*Read before the Section on Obstetrics and Non-Surgical Gynecology, Sixtieth Session Iowa State Medical Society, 1911.

nique of the times, they sometimes succeeded even though the village barber was the master of ceremonies. This practice was some times resorted to by the Israelites, the Egyptians and even savage tribes.

Roman prowess asserted itself in all departments of economy and the technique of Serramus and Celsus influenced obstetric practice throughout the middle ages.

During the third and fourth centuries of the Christian era, Roman culture succumbed to luxury, effeminacy and vice. The decline and fall of the Roman empire dissipated art. For 2,000 years after Hippocrates no progress was made in the obstetric art.

The writings and teachings of Hippocrates, Serramus and Celsus were preserved in the convents of Christian Europe; but for which the early history of obstetric art would have been annihilated. Science groped in heathen darkness during the feudal ages and little incentive was offered for scientific research.

The 16th century of the world's history and progress was a most remarkable epoch in the obstetric art.

To France belongs the honor of the greatest research. Ambroise Pare about the middle of the century discovered or rediscovered podalic version which ranked as one of the great discoveries of the century in medicine.

Andrae Vesalius, about the same time studied the anatomy of the pelvis, which with Pare's discovery lifted the veil of mystery which had clouded the practice for centuries.

These great practical discoveries mark the beginning of scientific obstetrics. It greatly simplified the practice and nearly abolished the long time custom of embryotomy with its disastrous consequences.

The evolution of the obstetric art to its present high plain of scientific attainment, has been achieved by laborious research throughout the ages; and like other branches of scientific medicine is under lasting obligation to that army of devoted workers who rescued it from its primitive condition and dignified it with the attributes of science.

Empiricism had dominated the ages till anatomy and physiology blazed the way to a higher conception of normal function. Those who were in touch with the profession forty years ago, realize with what reluctance the old time practitioners relinquished the theories and traditions of the past; "meddlesome midwifery" was so often interposed as a barrier against many of its advancements.

"To let nature take her course" was the sine qua non of rational midwifery; till step by step, its technique has been perfected, humane methods have supervened, and many of the dangers and the terrors of parturition have been eliminated by more benign methods and more rational therapeutics.

Some of us can remember when the home was regarded the safest and most suitable abode for the parturient woman; and the hospital the most objectionable, as a result of lurking infection and the traditional epidemic of child bed fever with its appalling mortality. All this is now changed, and the well appointed hospital or sanitarium with skilled nurses and professional attendants, constitute a resort where the parturient patient may meet her impending ordeal with that tranquility of spirit, and immunity from suffering and danger, that royalty could not have enjoyed but a few decades ago.

The use of chloroform in labor was resisted by those who regarded parturition a physiological function; and would divest it of all artificial innovations and appliances that were classed as meddlesome.

Sir J. Y. Simpson of Edinburgh, its distinguished promoter, urged and advocated its use to blunt the pangs of child birth, although it aroused a tempest of opposition.

It was maligned by the profession and anathematized by the church. Sacred and inspired teachings were invoked to emphasize the fact, "in sorrow thou shalt bring forth children." But the subject was fought to a triumphant finish for science and humanity.

Now the pangs of child birth are mitigated or abolished, by the judicious and merciful use of anesthesia, that every woman clamors for, who has ever experienced its salutary effect, during the trying ordeal of maternity.

I never regretted its most universal use, in my field of practice in all cases bordering on tedious labor, forty years ago; and its use was encouraged with my colleagues; for it has exerted the same benign and merciful influence in obstetrics as in surgery.

The obstetric forceps were regarded as an innovation of little merit by the fathers in medicine, and although abused at times through injudicious use and error of judgment, their very common use is now regarded a necessity; in mitigating the dangers and limiting the duration of suffering in woman's most trying ordeal; thus lessening infantile mortality, and favorably influencing the puerperium. My first experience in the use of the obstetric forceps, some more than forty years ago, in that most trying ordeal of a young obstetrician, puerperal eclampsia; and with instruments manufactured by the consultant—Dr. G. Murray—over a blacksmith's forge; but they were artistic in design and served the purpose of the trying ordeal.

Chamberlain the accredited inventor of the obstetric forceps early in the 17th century, and with whose family descendants it was a profound secret for several generations, (who achieved fame and fortune as London practitioners in difficult head presentations) might have pronounced them the highest type of the art. Any abnor-

mality in the mechanism of labor may call for their assistance. They diminish the pangs, expedite delivery and avoid the necessity for craniotomy and embryotomy, the last resort of the medical man of former days.

Their untimely and injudicious use tend to bring them into disrepute while their timely and scientific application will bring credit to the operator and the inventor alike.

The lacerated cervix, the ruptured perineum and the fistulated bladder, all of which have come under my observation, reflect discredit on the abuse rather than their use. Hence,

"Be not the first by which the new is tried,
Nor yet the last to cast the old aside."

Few practitioners of the healing art assume greater responsibilities than the obstetrician.

The emergency surgeon may be appalled at the ghastly condition of his luckless patient; whether in the railway wreck, the carnage of the battle field, or the no less frightful casualties that result from commercial pursuits and the mechanical arts. The problem presented by placenta previa, that may confront him at any turn of the road will tax his courage and fertility of resource to their utmost; and upon his technique and ready skill, will largely depend the fate of those entrusted to his care.

Its management has suggested a variety of expediences. A case illustrating this was attended by a colleague, in a somewhat inaccessible locality; being exsanguine from alarming hemorrhages, the attendant deliberately detached a centrally implanted placenta and removed it. (The life of the foetus being extinct), having no forceps, and contractions being extinct from frightful hemorrhages; he was powerless to deliver, and for some unaccountable reason he deserted his patient; after several hours' rest, pains were revived; the foetus was expelled, and the patient made a good recovery. The control of hemorrhage is often a serious problem, I once succeeded by applying ice to the endometrium; it was speedily expelled by vigorous contractions, which corrected the disturbance, and proved a salutary remedy.

Puerperal eclampsia with its insidious presence may drive the attendants from the room, in mortal terror by its frightful manifestations; and call for that prompt action as a life saving measure, that comes from a cool head and a well grounded conviction of its scientific management.

It has no fixed time for its intrusion; during gestation, the ordeal of parturition; or even the tranquility of the puerperium.

Its etiology is yet an unsettled problem; but doubtless implicates the toxemias of pregnancy.

It was once my misfortune to meet this dreaded complication of an otherwise normal labor, in a multipara; in anticipation of

which, an instrumental delivery was effected; thinking to avert the storm by emptying the womb and thus remove the cause; but it did not avail; for the dread enemy came; and the first and only convulsion proving fatal.

Post partum hemorrhage, at the hour of expectant triumph may rob him of his honors, and cast a pall over the home that his skill was expected to avert; and the baffled obstetrician lose an opportunity to advance the confidence imposed in him and his noble profession; and the designs of nature are thwarted, by depriving helpless infancy of that protection and support, when the young mother "feels for the first time her first borns' breath."

No less disastrous but more stealthy than the preceding calamities of parturition and maternity, is puerperal sepsis or child bed fever; that has made such havoc in past ages in the field of obstetrics and reproduction, as to render it the pest of maternity.

But happily its terror is nearly banished, or at least much abridged from the field of pathology; for science has demonstrated her ability to cope with germ life, and the problem of bacteriology. Under modern sanitary environments this once mysterious messenger that has caused such anguish of spirit in the home of poverty and affluence alike, has been made to feel the restraining hand of science; and yet, by some defect in technique, its presence is too often felt. The discovery of the infectious nature of puerperal fever about the middle of the last century, and the discovery of anesthesia about the same time were the events of the century along humanitarian lines and pathology.

Oliver Wendell Holmes in 1845 pointed out the infectious nature of the disease. But it was not heeded. Semmelweis of Vienna in '47 renewed the warning with better results; he attributed the fever to cadaveric poisoning, being assistant physician to one of the Vienesese maternities, his attention was attracted by the prevalence of child bed fever in the clinic attended by medical students who, frequented the dissecting rooms; and the absence of it in the clinic where the midwives were instructed.

Acting on his suspicion he greatly reduced its prevalence as well as its mortality, by prophylactic measures of which cleanliness was the most important.

Puerperal fever ravaged the lying-in hospitals and maternities in pre-antiseptic times throughout civilized lands; and thousands of women were sacrificed in the best years of life, for want of better knowledge of its etiology. In the great maternities of Paris, the mortality ranged from 3 or 4 to 10 per cent in different epidemics. Berlin suffered a greater mortality than from cholera and small pox combined. The disease was so prevalent in London that the *Lancet* advised the closure of the lying-in hospitals. The United States fared no better than the enlightened nations of Europe. The

Penn. hospital, Philadelphia, experienced a mortality of over 5 per cent while Bellevue hospital, N. Y., in 1872 experienced an epidemic with a mortality of 18 per cent. All manner of speculation was advanced regarding its nature and cause; but no suspicion attached to the pathologic properties of pyogenic germs. And was it strange that it was regarded "an unavoidable visitation of Providence?"

Oliver Wendell Holmes monograph, "The contagiousness of puerperal fever" was a pioneer in diagnosing its nature, before the dawn of Listerism; but the leading obstetricians of the day, Hodge and Meigs of Philadelphia opposed his views and delayed the dawn of aseptic midwifery.

Dr. O. W. Holmes in concluding his immortal essay on the "contagiousness of puerperal fever" in 1843 said: "It is as a lesson rather than as a reproach that I call up the memory of these irreparable errors and wrongs. No tongue can tell the heart breaking calamity they have caused. They have closed the eyes just opened on a new world of love and happiness; they have bowed the strength of mankind into the dust; they have cast the helplessness of infancy into the strangers arms, or bequeathed it with less cruelty; the death of its dying parent."

"There is no tone deep enough for regret, or voice loud enough for warning. The woman about to become a mother or with her new born infant upon her bosom, should be the object of trembling care and sympathy where ever she bears her tender burden, or stretches her aching limbs. The very outcast of the street has pity upon her sister in degradation, when the seal of promised maternity is impressed upon her. The remorseless vengeance of the law brought down upon its victims by a machinery as sure as destiny, is arrested in its fall, in a word that reveals her transient claim for mercy"

"The solemn prayer of the liturgy singles out her sorrows from the multiplied trials of life, to plead for her in the hour of peril."

"God forbid that any member of the profession to which she trusts her life, doubly precious at that eventful period, should hazard it negligently, unadvisedly or selfishly."

Semmelweis' logical views of the nature and cause of child bed fever were opposed by the leading authorities of Germany and of France and he died a disappointed man; but with prophetic vision predicted the final triumph of his views.

A dogged determination to resist the views of all progressive thinkers seemed apparent till the discovery of Lister in 1875 enabled the medical world to accept the infectious nature of puerperal fever.

Pasteur cultivated the streptococcus and demonstrated its etiology significance. The adoption of Listerian methods resulted in a marked lowering of mortality to 1 per cent or less.

Markoe reported a mortality of 1-3 of 1 per cent in 60,000 deliveries in the N. Y. Lying-in hospitals. Child bed fever is no longer

regarded a visitation of Providence but rather a violation of sanitary laws?.

On the general practitioner will rest the burden of limiting or abolishing surgical gynæcology. Obstetric pathology first comes to his notice, his most important duties are along the line of labor; hygienic, diagnostic and prophylactic.

Errors of discernment lead to errors of diagnosis. The mechanism of labor is not studied with sufficient care; face and brow presentations may be discovered too late. The transverse position has been so baffling as to lead to errors, ludicrous but for their serious consequences. The general practitioner must be held responsible for forms of malignancy whose only hope of relief comes from early diagnosis and treatment.

Mal-presentations and positions to be corrected must be detected early and their rectifications by external version is often practical.

Dr. Broadhead, (obstetrician to N. Y. University and Bellevue hospital,) believes that internal or vaginal examinations during labor is too often responsible for the infecting germ. I am convinced that many lives are lost each year from internal examinations which are absolutely unnecessary.

"I have demonstrated that labor can be conducted successfully with no vaginal examinations", but if internal examinations must be made let more attention be paid to asepsis, remembering that "no chain is stronger than its weakest link." The toxemias of pregnancy give danger signals that must be heeded.

Puerperal sepsis is too prevalent in private practice; statistics in private practice are extremely unreliable; death from sepsis is frequently assigned to other causes, either designedly or from error of judgment.

It was once derisively contended that caesarean section was more safely performed by the horn of an infuriated animal, than by the most skilled surgeon; and statistics seemed to justify the statement; but a more modern technique has rendered it a safer operation.

In the all too prevalent manifestation of this dread disease in its sporadic form in this aseptic age; is not the hand of the attendant or the armamentarium of the accoucheur too often, responsible for the transmission of the infecting germ?

Prophylaxis has rendered the hospital the safest place for parturient woman; while her home is yet exposed to the dangers of infection.

The oxytocic property of ergot introduced to the profession in 1807 by Stearns of Saratoga, was destined to become an important adjunct in the armamentarium of the physician, although it had been used by the midwives of Europe. It soon became popular and

indispensable as an exciter of uterine contractions and as a promoter of expulsive efforts, as well as for its hemostatic power; and it soon banished to oblivion those crude methods of empirical origin. Vomiting was once a barbarous method for augmenting the expulsive efforts of nature in emptying the womb.

The squaw belt traction upon the cord, various irrational manipulations, and religious incantations, were once regarded as assisting nature.

With ergot and Credes method of expelling the retained placenta, there is little danger of reverting to the old time irrational practice.

The vaginal speculum, an instrument so indispensable to the obstetrician and the gynecologist alike is generally credited to Resameir as its discoverer in 1816, but it had evidently been lost in oblivion for many centuries, for it has figured on Egyptian monuments of a bygone age, as well as the excavations of archeologists and antiquarians. Celsus has been credited with a knowledge of its use in Rome during the first century of the Christian era. But Sims greatly perfected it and extended its range of usefulness, for Sims speculum is known where gynecology is practiced.

We are apparently living in a surgical epoch. Our environments are prone to urge to operative procedure, despite the title of this section.

An appeal to the knife to more effectually meet and combat the dangers of placenta previa, puerperal infections, and other complications of parturition suggesting caesarean section, symphysiotomy, pubiotomy or some other modern resource of the obstetric art. And one of the problems of this progressive age, and the 20th century will be, to place the proper limitations on that oft abused therapeutic agent, the knife.

And while the obstetric art has triumphed, her sister science has achieved fame.

Gynecology occupies an exalted position among the humane achievements that have for their object the relief of human misery and the prolongation of human life.

American gynecology has received a hearty greeting from the enlightened nations of the earth. Ulceration of the cervix was long a problem that baffled the gynecologists, until the genius of an Emmet, in 1874 discerned its true pathology, and discovered trachelorrhaphy.

Ovarian tumor for centuries had defied therapeutics, and its hapless victims were consigned to a hopeless prognosis; till a general practitioner, a country doctor in Kentucky, mastered the situation, which stamped on Ephriam McDowell the honor of the discovery of ovariectomy in 1809.

With no anesthesia, no trained nurses and no recognized tech-

nique, the courage of the patient with the skill and daring of the operator, combine to form a picture unique for its grandeur in the annals of gynecology.

Another equally enterprising practitioner from the Sunny south, J. Marion Sims, of Alabama, in 1852 discovered for vesicovaginal fistula what McDowell had for ovarian tumor; and his long successful career in the field of gynecology-non-surgical and surgical—won for him the appellation of “Father of American Gynecology”. Sims’ discovery was greeted with the same faint praise that accorded McDowell by his colleagues, and the profession generally; and like McDowell his discovery was first recognized and applauded by the profession of the great capitals of Europe. “And it would seem that a prophet is not without honors except in his own country.”

The great names that have made American Gynecology famous in civilized lands; Ephriam McDowell and J. Marion Sims, were pioneers in great discoveries; and a sad strange feature of both experiences was; they first found recognition of their merits in foreign lands; which tribute was denied them at home.

THE MECHANICAL TREATMENT OF COMPLETE UTERINE PROLAPSUS, WHEN SURGICAL RELIEF IS REFUSED.*

J. F. H. SUGG, M. D., Clinton, Iowa.

Dr. Bowen placed me upon this program contrary to my wishes and without my knowledge. I have no paper to read you, but will talk to you for a few minutes on the subject announced.

I wish you to clearly understand that I am not offering a substitute for surgery, nor trying to avoid surgical treatment; that I am speaking of no condition other than complete prolapsus of the uterus, and by that I mean that condition where the uterus is completely extruded through the genital fissure; neither shall I trouble you by a rehearsal of the complications often found, except to say that a diverticulum of the urinary bladder usually forms a part of and is attached to the extruded mass.

We will assume that we have the patient before us. She may be old, and she may be young; she may be obese, and she may be spare; she may have had but one labor, and she may have had multiple labors; she may never have been pregnant; her uterus is completely extruded through the genital fissure, and is pendent between her thighs; she refuses surgical relief—mind that I do not say surgical measures are contra-indicated, but that surgical relief is absolutely refused by the patient. What shall we—what can we do for her. The extruded mass is enlarged, excoriated, ulcerated, in-

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flamed, and, consequently, tender. A diverticulum of the bladder is extruded with, and attached to, the mass. The contiguous tissues are also eroded and inflamed. Her condition is pitiable. She asks for relief, but restricts us to mechanical treatment. Can she be relieved by such treatment? I believe that she can. Before attempting to give permanent mechanical support to the diseased and prolapsed uterus, it will be necessary to employ temporary support, and such topical medicinal treatment as the condition indicates—treatment that will assist in reducing the size of the uterus and in healing the erosions and ulcerations. If the patient will consent to be treated at her home, or in a hospital, and will remain in bed for one, two, or three weeks, the treatment will be much simplified, and the uterus kept within the pelvis with but little difficulty; but we will assume that this patient insists that she cannot remain in bed; that she must attend to her household duties, and care for her family. Therefore, we must accept the conditions and meet the difficulties. First, we will ascertain the condition of the endometrium. The internal os is patulous, and we pass a stirile No. 10 soft rubber catheter to the fundus, which causes but little pain. We withdraw the catheter, and a little dark colored blood flows. With cotton on an applicator we gently apply tincture of iodine and alcohol in equal parts to the endometrium, and also apply the same solution to the extruded mass and contiguous diseased parts, and then replace the mass in the pelvis, while the patient is in the dorsal position. From a sheet of absorbent cotton, cut a piece approximately four inches square—rather more than less. Split this square, making two pieces. Prepare three such squares. Make a ball of lamb's wool about two inches in diameter when moderately compressed. Place this ball in the center of one of the cotton squares; dust the wool and the surface of the cotton freely with boric acid; bring the corners of the cotton together and form the cotton closely about the wool; with a white linen thread—about No. 50—wrap the cotton close to the wool, and continue to warp the cotton with the thread until you have formed a pedicle of cotton one to one and a half inch long; fasten the thread securely, and then cut off the end of the pedicle within 1-8 inch of the thread. This will give a square end that will not easily slip. The pedicle has a duty to perform, and it should not be less than 1-2 inch in diameter. Prepare three of such tampons. Saturate them with water; squeeze dry; dust liberally with boric acid and saturate with a good quality of glycerine—working them in your hand until the glycerine and boric acid are thoroughly incorporated in the tampon. Now place the patient in the knee-chest position; have her relax the abdominal muscles, and then thoroughly replace the uterus. Let me say that this is an important step in the treatment. Normally, the uterus is pillowed upon the bladder, and you must return it to that

position if your treatment is to be successful. If any part of the pelvic viscera is between the uterus and the bladder, failure must result. Work patiently and carefully. Have the patient relax the abdominal muscles and take deep inspirations, while you press the fundus forward and downward, and the cervix upward and backward. When the uterus is in place it will remain in position when pressure is removed. Now introduce a duck-billed speculum, and elevate the perineum. With a pair of dressing forceps, introduce one of the tampons and push it along the right side of the cervix until it rests against the right vaginal fornix; place the pedicle against the wall of the pelvis, near the pubic bone. Place another tampon in the same manner on the left side of the cervix. The third tampon, place partly in front of and partly against the anterior lip of the cervix, with its pedicle against the pubic symphysis. Now adjust the tampons so that they all arch toward the center of the vagina, thus turning the end of the pedicle squarely against the pelvic wall, and forming a tripod to support the uterus. If they are convex toward the pelvic wall, they will slip, and your labor will have been in vain. When I first used this treatment, I placed a small tampon within the tripod, hoping thus to keep the ends of the pedicles against the pelvic wall. The result was a failure. It is essential to have the ends of the pedicles turned squarely against the pelvic wall. When the tampons are ready for introduction, they are, of course, no longer spherical, but by manipulation, have become elongated, and formed into props with which to form a tripod to support the uterus. The patient may now return to her home, with the understanding that she is to return to your office the next day, when you will remove the tampons; give such local treatment as your judgment approves; again put the uterus in normal position, and support it with the tampons as in the first treatment. This treatment should be continued daily, or on alternate days if the support remains in place for two days, until the uterus and all other structures and organs are in condition for permanent mechanical support, when you will introduce my pessary.

Speaking of pessaries, let me say that I believe that any pessary that is contained partly within and partly outside of the vagina, needs to be mentioned, only to be condemned. They are unscientific; unsanitary, and ineffectual. They are pessaries without number on the market. I have tried many of them, and they have failed me much more frequently than they have succeeded. Any pessary to be successful in this case, must keep the uterus in its normal antiflexed position. When the fundus of the uterus rests upon the bladder, descent of the uterus is practically impossible, and prolapsus of that organ cannot, therefore, occur, regardless of the condition of the perineum.

The pessary that I have used successfully in these cases for

something like a dozen years, I form from an ordinary rubber ring pessary, three and a half to four and a half inches in diameter—occasionally a five inch ring is used. The pessary must be made for and to fit the patient. It would be just as reasonable, and equally as consistent, to expect to buy ready-made artificial teeth to fit the mouth, as it is to expect to purchase ready-made pessaries to meet the conditions found in uterine displacements. You can't buy them. You must make them. If you do buy them, then you must reform them to fit your patient, if your treatment is to be successful. This pessary (exhibits a pessary) was made from a four inch ring. You may observe that in shape it resembles the Albert Smith pessary, both curves, however, being greater than in that instrument, and that the posterior end, or base, is much wider, while the anterior end, or beak, is narrower, and that the lateral bars are parallel for a distance of one and quarter inches from the beak, when they bend sharply outward at an angle of 30 to 35 degrees, and so extend into the posterior end and curve. This makes the instrument wedge-shaped from the base to within one and quarter inches of the beak, where the bars become parallel, forming a long beak sufficiently narrow to pass under the pubic arch. A distance of one and half inches from the anterior end, in the center of the inner surface of each lateral bar, a 1-12 inch hole is drilled at right angles with the long axis of the instrument, and to a depth of, approximately, 1-3 the diameter of the bar. With a sharp file form a tenon on each end of a piece of hard rubber bar, that is of the same diameter as that of which the pessary is made. The tenons must not be too long nor too large, but should fit freely into the holes in the pessary bars. The distance from shoulder to shoulder of the cross-bar should be about 1-16 of an inch more than the distance between the pessary bars opposite the holes. This will cause the pessary to grip the cross bar firmly, and prevent it from moving. You can easily spring the pessary sufficiently to enable the cross-bar to be introduced. An effort should be made to so form the shoulders of the cross-bar that they may make a reasonably close joint with the bars of the pessary, but any thing like a perfect joint is by no means necessary. If you have drilled the holes and formed the tenons, centrally, there will be no difficulty in covering and smoothing all imperfections with dental black wax. This wax remains hard at the temperature of the body. Melt the wax into the joints and fill all uneven places more than full. When the wax is cold and solid shave off the redundancy, and then polish with vaseline on cotton. The cross-bar is the only part of the pessary that is troublesome to make; but, remember that you are making a splint to keep in place an important organ, and that you have often expended more time and patience to form a splint to retain in place a fracture or a dis-

location, than is required to make this pessary. I have made one in twenty minutes. By boiling the hard rubber ring until it is perfectly ductile, it can be quickly formed into any desired shape. By keeping the surface of the hard rubber covered with vaseline any part of the pessary may be heated to ductilness in an alcohol or Bunsen flame, and formed as desired, without disturbing other parts of the instrument.

When I digressed to describe my pessary, the patient was in condition to wear permanent mechanical support, and I advised you to introduce my instrument. The pessary is introduced in the same manner as other pessaries of similar shape. The posterior end is passed behind the cervix, which is then pushed upward and backward, while at the same time the beak of the pessary is pressed toward the perineum. By this maneuver the cervix may be easily placed behind the cross-bar. Now place the patient in the knee-chest position, and manipulate the uterus into perfect position. When that is accomplished, press the beak backward and upward, in order to bring the posterior curve against the uterus. Now place the patient again in the dorsal position, and carefully examine the instrument as to fit. The long beak should rest, freely under the pubic arch; the shoulders should be not less than 3-8 of an inch from the descending pubic rami; the posterior end must not be too wide, but must be wide enough and the curve long enough to put the vagina on the stretch, and the cross bar of the posterior end must approach, or rest against the uterus at a point considerably higher than the cross-bar's position in front of the cervix. The instrument must be perfectly free in the pelvis. Usually I do not wax the instrument until after the patient has worn it for several days, but as the waxing is quickly done, this point is of no consequence. If the instrument does not fit, it must be removed; the offending part heated in a flame, and corrected.

The wide posterior end with its curve increased both in length and degree, serves to sufficiently stretch the relaxed and abnormally distended vagina, and thus draw the cervix toward the sacrum; the cross-bar being in front of the cervix prevents it from moving forward. Should the uterus attempt to retrovert, it is at once met with resistance from both cross-bars of the instrument. The posterior bar will impinge on the uterus at a much higher point than does the anterior cross-bar, giving the instrument the advantage of leverage; the long narrow beak is brought against the under surface of the pelvic arch; the shoulders of the instrument strike the descending pubic rami, and the fundus of the uterus is again thrown forward upon the bladder. This will occur unless some part of the pelvic viscera is between the uterus and the bladder. If such is the case, then a constant fight will be kept up between uterus and pessary, which

necessitates removal of the instrument and the displaced obstructing viscera, and restoring the fundus of the uterus to its pillow upon the bladder. Then replace the instrument as before. The closely approximated bars, anterior to the shoulders of the pessary, supports the bladder, and prevents sagging, and the formation of a diverticulum and cystocele. This condition, however, is not liable to occur, if the uterus is kept in normal position, unless the bladder has been stripped from its attachment to the uterus, which is sometimes the case in complete procidentia.

How successful others may be with this treatment and pessary, I cannot predict, but I have used it for more than a decade in quite a large number of cases, with uniform success. I will mention two cases.

About eight years ago, a patient, suffering with complete procidentia uteri, came to me for relief. She had then been treated for more than a year, unsuccessfully. Under the treatment that I have described, the uterus was kept within the pelvis. After about two weeks of treatment, my pessary was introduced, and it gave immediate comfort. The patient gave, and attended, social functions; walked; rode; danced; played golf, all without the least annoyance from either the uterus or the pessary. The organ remained in place. Within a year she became pregnant. Between the second and third months of pregnancy, I removed the pessary. Pregnancy went to term, and she gave birth to a healthy child. After recovery from her accouchement the procidentia returned. The pessary was again introduced, and she has worn it, or one like it to the present time. The pessary is removed once every two or three months, cleansed, and it, or one like it, re-introduced. Surgical relief was, and still is, refused.

A lady visiting in Clinton, was suffering greatly from complete uterine procidentia. Some of her lady friends told her of my success in such conditions, (you know women will tell things, the same as men do,) and she came to me for help. She was 47 years of age; weighed 225 pounds, and had suffered with complete procidentia for more than twenty years. Surgical relief was positively refused. Her home was near Chicago, and she said that she had been there many times for relief, but had been told by all whom she consulted that surgery was her only hope. On examination, I found a mass about four inches in diameter and six inches in length, suspended in a cotton sack between her thighs. This mass was, of course, the uterus and a diverticulum of the urinary bladder. After a careful examination, I advised a surgical operation. This was promptly and positively refused by the patient, who said that she would never submit to an operation. She also declined to remain in bed for a few days, giving as a reason, that she had engagements all over town for social functions, and that they must be kept. After painting the mass in-

side and out, with the dilute tincture of iodine, I punctured the uterus in several places, and the congested organ bled freely. I then painted the punctures with iodine; replaced the mass in the pelvis, and put the uterus in normal position, by means of the method previously described; supported it with the tampons, and sent her on her round of pleasure. For about a week she came every day to my office for treatment, when she told me that she would leave Clinton within a day or two. I had made a pessary for her, and I introduced it, notwithstanding the fact that the parts were not yet in satisfactory condition. She reported the next day. Had had no discomfort from the pessary, and the uterus had remained in position. She said that she was going to Davenport the next day, but would report to me before returning to her home. I did not see her again for three years, when she unexpectedly appeared at my office. I supposed that she had come to tell me "That it was the same old story, and that she was in the same condition as when she first came to me." But she was hilarious, and declared that the last three years had been the happiest of her life; that the uterus had remained in place; the pessary had given her no discomfort; that she was well and happy; that she had called merely to thank me for what I had done for her, and to express her appreciation; that she did not wish an examination, or to have the instrument touched. I prevailed upon her to submit to an examination. I removed the pessary. It was smooth and clean, except the beak, where urinary concretions had formed. No abrasions or ulcerations had been produced. The pessary was cleaned and re-introduced. The patient departed, promising to return when in trouble. That was eight months ago, and I have not heard from her since. I am aware that an invention is usually more successful in the hands of the inventor, than it is in the practice of others. A thorough knowledge of what is necessary to be done, and an intelligent understanding of the means and the methods by which it may be accomplished, combined with skill and patience will bring success.

DISCUSSION.

J. F. Herrick, Ottumwa: The surgeon would usually say: "Don't take a case if they won't let you do what you think best, but there are times when we must do as Dr. Sugg has suggested; make the best of the conditions and relieve our patients, even though we know it is not the best thing to do. I believe very thoroughly in surgery, but I believe very thoroughly that in many cases something else may serve the purpose. This is one of the conditions. Complete prolapse of the uterus may be remedied in the manner that Dr. Sugg has suggested, and no doubt he has succeeded. Many times the uterus has been suspended and other operations done, when the case could be cured by such methods as the doctor has suggested, and I believe quite as satisfactorily cured, or at least relieved; because you get away from the psychological effect of an operation, which in some patients is bad. It inclines the patient to give attention to the pelvic organs; causes them to believe they are seriously diseased when they are not. Relief given in this manner makes it appear that there is no serious disease and the psychological effect is better.

There are cases, even where an operation could be secured that would be quite as satisfactorily treated in some other manner; and yet I would not want to appear to advocate this line of treatment rather than surgery in the majority of cases. I see no reason why the method that the doctor has suggested should not be successful unless in a case of complete laceration of the perineum, when I believe it might be impossible sometimes to give relief by this or any other mechanical method, outside of surgical treatment.

T. H. Throckmorton, Chariton: I was very much interested in Dr. Sugg's description of his ingenious invention. I believe I understood him to say that he had a pessary remain inside a woman two or three years. I just wish to add that I think I can go him one better. Ten or twelve years ago I was called to see a Swede lady who had a discharge from the vagina. On examination I found something hard. I worked my fingers around it and finally succeeded in removing the object, which proved to be a disc of beeswax about 2 1-2 to 3 inches across, with a hole in the middle and about half an inch or a little more in thickness. The best information I could get from her was that a doctor over in Sweden ten or fifteen years before had done something to her, and she didn't know that there was anything in her.

Dr. Sugg: In regard to the statement by Dr. Herrick that he didn't believe my instrument would be successful in a complete rupture of the perineum, I would say that the instrument does not depend a particle upon the perineum for its support, and it will hold the uterus in position just as well with a ruptured perineum or a broken-down pelvic floor as it will otherwise.

As far as leaving the instrument in position for three, ten or any number of years, that was not advocated. Of course a pessary should be examined every few months, no matter how well it fits. But as for keeping the uterus in place with my pessary, I never failed but once and that was where the woman had submitted to a high amputation of the cervix. There was just a little "nubbin" left that would come out, and the only way I could keep that in the pelvis, was by introducing a quite large sphere, or ball pessary, into the vagina.

THE MODERN TREATMENT OF FEVERS.*

FRANK MURPHY, M. D., Sioux City, Iowa.

A preliminary consideration of some of the main facts in connection with the phenomena of fever will serve to give direction to our views regarding its proper management.

In the first place, fever may be brought about in several ways; but so far as the practical question of treatment is concerned, we are chiefly interested in those fevers which occur in connection with infections, i. e.: fevers brought about by the presence of microbes and their toxins in the body.

In this connection it is proper to call attention to the fact that it is the diffusion of these toxins in circulation that gives rise to the symptoms, including the fever, for, the clinical picture of an infection can be artificially produced by the injection of isolated toxins. These toxins act by disturbing heat-producing centers in the brain or spinal cord, and in turn these centers react upon sundry tissues of the body, especially muscle and liver cells, and inaugurate in them certain processes which result in exaggerated dis-

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sociation of cell substances, the products of which, undergoing oxidation of the chief source of increased heat production.

At a time not so remote, we were disposed to look upon fever as a dangerous condition, and much time and thought was given to the perfection of various methods employed in its reduction. Our views, resulting from recent clinical and experimental observation, have undergone a radical change, and instead of viewing fever with alarm, on its own account, we recognize that it is merely the expression on the part of the organism of a reaction which results in the production of anti-bodies or substances which will serve to neutralize toxic causes.

Speaking of fever, Adami, in his great work, says, in part as we saw that inflammation is a process of adaptation of tissues to local injury, so fever is the process of adaptation to such toxic agencies as can be neutralized by the developments of anti-bodies."

My main contention will be that the management of fever is simply the management of the under-lying toxemia, and just as we recognize that certain depressing influences will increase the susceptibility to infection through lowered resistance. I hope to point out that these same conditions, if allowed to operate, will serve to perpetuate an infection with its resulting fever.

All factors leading to general lowering of nutritive tone, such as starvation, over-exertion, disordered blood states, including anemia,—perhaps diminished alkalinity of the blood—the retention of waste products through deficient renal functions, of stagnation of intestinal contents—any of these are capable of lowering the natural protective powers of the body against bacterial invasion, thus increasing the risks of infection.

The management of a case of fever should be directed mainly to maintaining nutrition by strict attention to diet, in its relations to the digestive capacity, and promoting the functional activity of all the organs, especially those concerned in elimination.

It will be convenient to consider these details under several headings, including hygiene, rest, diet, hydro-therupy, and drugs.

Hygiene. In health, the temperature of the surrounding medium in contact with the body will influence its temperature one way or the other; and the infant is more subject to such variations than the adult. This susceptibility is exaggerated in disease, and for this reason proper clothing should be provided for, light but sufficient for protection in cold weather, should be reduced to promote the patient's comfort in hot weather. Any exertion must be carried on at the expense of the vital powers, which should be conserved in the interest of the patient. Exercise also increases heat production, and for these reasons, rest for body and mind is almost imperative. It goes without saying that sun light and fresh air are still more essential here than in health.

Diet. Heat generation may be increased, and other disturbances result from the indigestion of solid foods that require considerable activity on the part of the digestive glands. The first step is to reduce the diet to the minimum of the body's requirements, best given in liquid form, at first. An initial fast had better be carried out in the beginning of most fevers, the duration to be varied according to circumstances. In diseases of short duration, especially in the well nourished, this may be continued for two or three days with benefit, giving time for a thorough housecleaning and affording the functionally disordered organs an opportunity to re-adjust themselves. At the extremes of life and in other weaker subjects, it may be better not to continue the initial fast longer than twenty-four hours. Free drinking of water should be encouraged as it promotes the action of emunctories, skin, kidneys and bowels, and tends to lower temperature by increasing thermolysis and elimination. Citrous drinks and tea or coffee often serve as an agreeable change, the former is also given for their anti-scorbutic properties, and the latter for their stimulant action.

The custom carried out in some of the larger hospitals of keeping a special nurse going about the fever wards with a bucket of water, encouraging the patients to drink, is commendable.

Milk is an ideal food for fever patients, because it represents all the elements necessary for perfect nutrition in an easily digested form, and because it does not leave an appreciable bulk of unabsorbed material to undergo decomposition in the intestines. It can be flavored or modified in other ways to overcome monotony. Broths or meat juices can be used for variety in the early stages of fever, except in protracted cases, where their too free use should be discouraged, as they possess practically no nutritive value. Semi-solids are indicated later on with the return of appetite, including such articles as are readily liquified in the mouth or stomach, as ice cream, soufflé, custards, cereal gruels carefully prepared, etc. As patients enter the convalescent stage there should be a gradual return to solid food.

Hydro-Therapy. The local use of water has long been a favorite method in the control of fevers. More recently the direct introduction of water into the tissues by transfusion and hydro-dermoclisis has come into general use. The tub or bran is no longer popular on account of its inconvenience, and for other reasons. It was formerly used to control high temperatures, especially in typhoid fever. The sprinkle bath is more convenient, and is carried out by placing the patient on a rubber sheet which should hang over a tub at the foot of the bed, while the head of the bed is elevated to give it sufficient incline. Water is allowed to trickle over the body, especially over the trunk and lower extremities, from the nozzle of the sprinkling can, or a sprinkler attached to a large irrigator.

Friction of the skin should be applied to promote peripheral circulation, during the bath of any sort. By promoting nervous innervation through its stimulant action on nerve centers, cold water stimulates all the vital processes, including the important functions of the heart, lung and kidneys. Colon irrigation is a deservedly proper procedure in the treatment of fevers, and water can be used ice cold for the reduction of higher temperatures. In uremic conditions, with or without fever, the use of three or four gallons of normal saline solutions at a temperature of 112 degrees, constitutes one of our most reliable measures. Introduced into the body in this manner, heat is an excellent stimulant, sometimes promoting the functions of the heart, skin and kidneys in a remarkable manner.

Drugs. In my opinion, drugs are minor agents, not only in the treatment of fever, but also in many other conditions. They may be given at certain times to stimulate flagging functions. Nothnagle has said: "After making a diagnosis, do not ask yourself what medicine will I give, but ask yourself the question, will I give any medicine at all", or words to that effect.

In fever the bowels should be opened daily, with cathartics or enemas, and the question often comes up, what kind of cathartics shall be given? Salines or calomel in broken doses, to avoid excessive action, should be preferred. The former are hydrogogues and epsom salts produce the largest watery stools of any. Calomel is a glandular stimulant, promoting the action of the intestinal glands as well as the liver and kidneys, and for this reason I prefer it to any other cathartic in the treatment of infections.

THE SIGNIFICANCE OF FEVER.*

WALTER L. BIERRING, M. D., Des Moines, Iowa.

It seems proper to speak of fever as a reaction—a febrile reaction—as something characteristic of the body and not of the disease, and from this point of view I would like to consider it.

It is difficult to define one's conception of the nature of fever because even yet we are unable to say with certainty at what point the direct effects of the cause of the disease end, and what really belong to the fever.

While the salient points of fever are familiar it must be recognized that the elevation of the body temperature is by no means the only characteristic, nor is it always an infallible sign of fever, for such elevation of temperature can occur in a healthy person if for example he has been immersed in a hot bath.

With reference to the other recognizable signs such as thirst,

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weakness, alterations in character of the urine, it is difficult to determine what part of each is produced by the bacteria or other agencies that cause the disease, and what part by the fever itself.

The present knowledge of fever has been developed along two lines, first, by clinical observation of patients with fever, and second, by the study of fever states experimentally produced in animals.

From the uniform ideas that prevail as to its general character it is clear that no matter what the nature of the disease that brings fever with it, the fever itself is the same. Whether ushered in by a chill, or by gradual onset—continuous in nature or intermittent—terminating by crisis or lysis—it is always recognizable as fever.

Regarded in the light of a reactive process it constitutes one of the most expressive signs in the entire symptomatology of disease; Infection and fever seem so closely related that Kraus and others have written of them together. In fact, the evolution of an infectious disease in the human body is suggested by the fever curve.

The primary significance of fever is as a diagnostic aid, and as a guide of the manner in which the disease is affecting the individual—in fact, we have come to know disease by a careful study of the fever chart—often a simple glance at a fever curve is sufficient to name the disease. Certain types of fever are recognized as distinctly pathognomonic and their proper interpretation is of considerable clinical importance.

A fever of sudden onset, ushered in by a chill followed by several days of continued fever and terminating suddenly by crisis, is significant of pneumonia and cerebro-spinal fever; and this similarity makes it logical to think of these two diseases as closely related infections.

The step-like rise of a typhoid fever curve is as helpful for diagnostic purpose as a Widal reaction; again in no other infection do we meet with such a sustained fever curve as in a well established case of typhoid; the step-like rise of a typhoid relapse is equally suggestive of a re-infection.

The curve of malarial fever with its characteristic intermissions is sufficient to formulate a diagnosis, as well as the type of plasmodial infection concerned.

A primary and secondary rise in the fever curve characterize the onset of a measles.

In this region a continuous fever suggests either a typhoid, tuberculosis, or a sepsis, and yet each has special distinguishing points to differentiate them; the sustained fever curve, and wide margin between temperature and pulse curve suggests a typhoid; the peculiar wide excursions of a septic fever curve are familiar—illustrated well by the chart of erysipelas, empyema, and other distinctly pyogenic infections.

The afternoon rise of temperature and wide excursions between morning and evening temperatures are peculiar to tuberculosis.

Of equal import and interest in clinical observation are the sudden variations to which a fever curve is liable. The crisis-like drop of fever in pneumonia with the corresponding drop in pulse and respiration, are a great relief to both patient and attendant, yet a similar drop during a typhoid is of serious significance and often ushers in a fatal intestinal hemorrhage or a perforation. In the last example, the drop in temperature is accompanied by a corresponding rise in pulse and respiration curve.

A hyperpyrexia usually suggests a severe infection, and when it develops during the course of a continuous fever of moderate degree, or during the course of any illness, it is an ominous sign and frequently signifies an impending exitus.

Of special interest is the accompanying chart of a typhoid fever infection of thirteen weeks duration and final recovery. This affords a sample of the recent epidemic being one of the so-called Thanksgiving crop. It suggests the ability of the human organism to withstand long courses of fever, and yet terminate in apparent complete recovery.

It is a matter of further clinical interest that every fever does not necessarily signify an infectious process.

Aside from strictly infectious micro-organisms microbic toxins have been injected into rabbits, and a fever produced identical with that in the human individual. Bacterial proteins, endo-toxins like Tuberculin R are capable of producing fever. Vaughan has demonstrated that foreign proteins-non-bacterial in origin—are capable of producing a febrile state. Hemorrhage products and results of hemolysis are equally prominent factors. A large hemorrhage with no accompanying septic infection will develop a fever lasting several days.

Thrombi forming in veins during convalescence from a typhoid give rise to a short fever, purely the result of absorption from the thrombus. The fever of an uncomplicated pernicious anemia, is to be attributed to the products of hemolysis.

Furthermore the sterile extract of juices of tissues are capable of producing fever—as thyroid extract, for example, and thus the fever of exophthalmic goitre is to be explained.

The hyperthermia of sun-stroke can hardly be attributed to the exposure to the heat entirely, but must be the unusual disturbance in the nerve centres influencing thermogenesis.

It is evident that the febrile reaction can be occasioned by a variety of injurious agencies acting on the body. From the extensive studies on fever one can safely assume the existence of a heat regulating mechanism, a mechanism which is furthermore marvel-

ously exact within wide limits and evidently under the control of a thermogenic centre.

In fever, the heat regulating mechanism is greatly disturbed, and the facts adequately prove that the disturbance is more in the direction of increased heat production rather than lessened discharge. While the febrile reaction is evidently characterized by a moderate increase in the oxidative processes and consequent increase in heat production—on the whole—the change in metabolism as developed from the numerous studies made on this phase of the subject, is not one particularly marked by its intensity, but rather by the peculiar proportion in which the materials are concerned, and the formerly accepted idea that we have to deal with a greatly increased oxidation is upheld neither by the amount of heat produced nor by the quantity of oxidation products resulting.

From the constancy of the characters of the febrile reaction, no matter what the exciting cause of the fever may be, one can not regard it as the mere effect of the injurious agent on the passive body, but rather in the light of a definite plan on the part of Nature to answer some special purpose.

The aim of the individual peculiarities of metabolism, is not so easily grasped, but one can not escape the conviction that they are designed to play a part in the general plan, and because this reaction has developed in the long process of evolution, it seems almost inevitable but that it is devised for the good of the organism and that fever is in itself a protective reaction.

Although most of the older writers, as a result of observations at the bedside, entertained the belief that fever signified a greater or lesser protective influence, it was lost throughout long periods in the struggle of physicians to cure the fever regardless of the disease. Liebermeister held to the view that a continuous fever of 40 C or above signified the death of the patient, and in consequence he advocated a most energetic antipyresis by means of cold baths. At the time these views were combated by Curshmann, Gerhardt and Naunyn.

It is only in recent years that it has again become usual to think of fever as probably a beneficial reaction which should not be interfered with.

Just how this protective influence exerts itself, has been a difficult problem to solve by simple bedside observation. The experimental researches until recently have also not greatly changed the conclusions, some speaking for and others against, but a paper by Rolly and Meltzer published in the *Deutsch Archiv f. klin. Med.* 94, 1908, 335, marks a most important advance in the comprehension of the true nature of fever. This most interesting work was carried on by keeping animals, rabbits and guinea pigs, in well ventilated warm chambers, the temperature being carefully controlled. The

animals were gradually accustomed to the increased heat, the experiments being conducted while the animals showed a fever body temperature of 39-40 C. (102-104F). Control animals were always used in each experiment, these being kept at ordinary room temperature.

The purposes and results of the experimental work may be briefly stated. They found the growth of bacteria somewhat inhibited by a temperature of 40-41C. No certain result could be obtained as to the protective effect of overheating on animals infected with bacteria when large quantities are injected at once. If, however, smaller quantities are injected daily there is a distinctly favorable influence.

The alexin content of the blood of animals infected while overheated is not increased. Phagocytosis is perceptibly increased in all experiments. Heating had no influence on the resistance of animals to fatal dose of a bacterial poison, but when small doses were given, the development of agglutins and bacteriolysins, were produced far more rapidly and abundantly in animals kept overheated than in those which were kept cold. The latter results demonstrated clearly the increased production of anti-bodies or immunizing substances under higher or fever temperature.

An additional important fact developed was the effect of febrile temperature on the tissues of the body, it being found that while the fever temperature injures the organism to a certain extent by causing loss of weight, lowering the hemoglobin index, etc., there were no definite injuries or pathologic changes in the liver, kidneys, spleen, and heart muscle, produced even by the long heating. While overheating can not be regarded as purely identical with the condition in fever, the results obtained coincide so closely with the view entertained from bedside observation, that this work has certainly marked an advance in our conception of the subject.

The recent studies in immunity show that when the tissues are attacked and injured in a process of adaptation of tissues to local injury, so is fever a process of adaptation to such toxic agencies as can be neutralized by the development of anti-bodies.

The very fact that when the injury is overwhelming we may have no febrile reaction, and that when the course of the infection or intoxication suddenly changes to the advantage of the organism the fever ceases, points to a close analogy between the febrile process and the process of the production of immunity.

The animal experiments cited indicate that the production of immune substances proceeds in a way impossible at a lower temperature and suggests the purpose of a higher temperature.

A good febrile reaction, like a leucocytosis, is a good criterion of the resistance of the individual to an infection.

In some instances the very intensity of the reaction defeats

itself, and death occurs through the occurrence of a hyperpyrexia.

It is an attractive explanation as regards the significance of fever, that so far as heat production and elimination are concerned—the balance is not disturbed to any appreciable degree, but that this balance is established on a higher level by the heat regulating centre, which centre, under unusual demands shows an instability, the degree and character of which are expressed by the character of the temperature curve. Again in severe toxemias where toxic action is marked by a selective action as in tetanus on the nervous system, sun-stroke on nerve centres, pneumonia on the lungs, rheumatism and diphtheria on the heart muscle. Death is due to one of the vital trinity becoming inactive, while the general reaction is proceeding vigorously.

In view of the knowledge thus far developed one can but voice the sentiment expressed by MacCallum, that the febrile process is a reaction beneficial to the organism intimately associated with the development of protective substances to combat the injurious agencies which have invaded the body.

DISCUSSION OF PAPERS OF DRS. MURPHY AND BIERRING.

J. T. McClintock, Iowa City: It has undoubtedly been said that fever is but an outward expression of an extensive metabolic change which occurs within, and of which the elevation of temperature is but one of the manifestations. The elevation of temperature is, indeed, produced by either an increase in the amount of heat produced or by a diminution in the amount of heat lost or it may be by a combination of both. There seems to be a general agreement that the regulation of body temperature is under a more or less definite heat center, not well located in central nervous system, but called a "thermotactic centre". The action of this centre is most direct upon the loss of heat from the body and its action is accomplished by alteration in the superficial blood supply and through changes in cutaneous blood supply to produce a greater or lessened amount of heat radiation. Fever produced by a diminution of heat lost is probably due to an alteration in this centre and is thus somewhat of a nervous character.

Heat production is the result primarily of oxidation, which takes place in different parts of the body but especially in the muscles and in the liver. In fevers produced by an increased amount of oxidation the change is affected by increased oxidation taking place in the liver rather than in the muscle as in the case in physiological elevations of temperature. The action of the liver is not under direct nerve control but seems to be regulated by what is termed a chemical reflex, that is in a way similar to the regulation of vital functions by internal secretions. An alteration in the kind or amount of certain chemical substances brought to the liver by the blood may cause an increase in the oxidizing processes which take place in the liver and thus the fever. In septic fevers it may be by the introduction of toxins or the production of various antibodies that calls forth the increased oxidation on part of liver cells while the thermolytic processes remain unaltered. Generally during the first stage of a fever there is an increased production with a decrease in amount of heat; during the fastigium there is an increase in heat produced and also an increased heat loss, while during the last stage there is decrease in heat production and an increase in heat loss. Therefore whether the fever is central, nervous, in origin or peripheral depends upon whether the elevation of temperature is produced by changes in thermolysis or in thermogenesis; the first being due to alteration in activity of a nerve centre and may thus be called central; the second case

the chemical substances change the activity of a gland, independent of nerve action and may thus be called peripheral in origin. We must however remember that we can have both conditions as the cause of the fever.

W. L. Hearst, Cedar Falls: It seems to me the subject has been so well covered that there is practically nothing left to be said. If fever is a natural process of the body—if it is a heat production, it seems to me the best thing is to avoid over-treating our patients. Stimulate the secretions and the excretions, but otherwise let them alone, and not reduce their vitality by over-treatment. It would seem to me that it could be expressed in a few words by saying, do not over-treat the patient. Unless there are special indications, such as sunstroke, heat exhaustion, or some special consideration, the fever is a manifestation of nature in attempting to re-establish an equilibrium, relieving infection and relieving the patient.

C. F. Wahrer, Fort Madison: I would like to make a suggestion that is analogous to the way fever is usually treated. If you would sever the nerve supply just below the medulla, the fever would cease in a short time. Somebody might object to that, however. Next to severing the nerve supply and killing your patient, "swat it". That is a new language, but I think most of you know what it means. It is pitiful to see the efforts that are put forth by the average practitioner in compliance with the demands made upon him by the patient or his friends, "Doctor can't you break the fever?" I think we all agree that fever is a beneficent symptom (let me call it that for want of a better name) in the process of the various diseases; and if we will treat the disease and let the manifestation of pyrexia alone, except the hyperpyrexia, which in themselves may cause death, we will do a great deal for the betterment of the patient and to our own credit.

An endless number of nostrums have been produced; phenacetin, commonly called antifebrin, or ordinary acetanilid, with a thousand combinations, the circulars of which have flooded our offices, each one of which will not 'swat' the nerve supply and won't hurt the heart one bit", but all others are wrong. It is wonderful to look into some doctor's medicine case and find half a dozen of these side by side. If one of them doesn't break the fever, the other will.

The indications for the treatment of fever are the indications for the treatment of the disease that you have in hand, and as a rule you will be safe in letting the pyrexia alone except in a few cases which have been mentioned; and then it is not the fever that kills the patient, but it is the disease that produces the hyperpyrexia. Let us not be under the mandates of the patient or his friends who are continually asking, "what is the temperature?" We take our patients too much into our confidence when we put the thermometer into the mouth and then tell everybody what it is. The patient thinks the rise and fall of the thermometer is the index of the severity of the disease, and it is also at the same time an index of the ability or want of ability of yourself as a physician. We should be absolutely independent of the demands of our patients in regard to the treatment of disease; and we should do less in regard to pyrexia and hyperpyrexia, but more in regard to the rational treatment of the disease itself.

G. S. Browning, Sioux City: I would like to ask if it is not possible that anti-pyretic measures have some effect on the toxæmia in the condition present in a case of fever, aside from reducing the temperature itself? For the most part this discussion has seemed to indicate that the fever was of little importance or significance; that it was merely an indication of the conditions present. Then is it not reasonable to suppose that if the fever may be reduced, the other conditions present are likewise improved, and simply show this improvement by the decrease in the fever? It appears to me that possibly this idea of non-treating or over-treating the fever is carried too far; that we have some remedies—not necessarily drugs, but hydro-therapeutic and other measures—that have some influence upon the toxæmia itself, and tend to the reduction of the fever and temperature itself, with the deleterious action of all of the other organs and other conditions present. To my mind, if a drop in temperature can be secured, together with a reduction in pulse rate, with a production of the more normal condition of the skin and an im-

provement in all of the general symptoms, the treatment, whether it may be drug treatment or other measures, is of benefit to the patient, even if it does reduce the fever.

W. L. Bierring: I am glad that there is a general opinion that fever is a purposeful reaction, but I hope the impression will not be gained from what has been said that we decry the use of remedies for the reduction of fever. While I do believe that anti-pyretics—that is, drugs—should be used only as a last resort hydrotherapy should have its place, and in many instances undoubtedly does much to sustain the organism and to tide it over the critical period. On the other hand, regarding fever as a beneficial reaction, it seems to me that there should be a plea for a closer observation and more careful record of temperature, so that we may recognize just how our therapy and our other measures for relief are effective. Furthermore, a closer study of the fever through the course of an illness is the best guide as to the manner in which the disease is affecting the individual, and also as to the result of our treatment.

F. J. Murphy: I think we are all convinced that the cause of typhoid fever is beneficially influenced by hydro-therapy. Statistics show that the bath treatment has lowered the mortality rate. The action of cold by stimulating the renal function, in other words, the diuretic action of cold is probably responsible for the reduction of temperature following the bath.

It would be a long discussion, this question of the action of anti-pyretic drugs. It is sufficient to say that drugs which have the most decided action in bringing about temperature reduction, do so by acting toxically on thermogenic centers, bringing about diminished heat production. I do not understand how such influences can favorably modify the course of an infectious fever.

In the management of hyperpyrexia occurring in heat stroke, or in the course of such severe infections, as pneumonia, or rheumatic endocarditis, it may be advisable at times to use them, as fever is a blind reaction of the organism, and in such cases, may exceed useful limits, and defeat its own purpose.

The point I wished to make in my paper was that in the management of fevers our chief concern should be to maintain the activity of the various functions, giving special attention to the conditions of the excretory organs.

TOXEMIAS OF PREGNANCY.*

S. K. DAVIS, M. D., Libertyville, Iowa.

Mr. President and Members of the Society:—

The subject of toxemias of pregnancy is a comprehensive one, and in the brief time at our disposal, can only be considered in a superficial manner.

Yet, bearing in mind that the success of a paper is often due more to the selection of a subject than what the essayist says, I will endeavor to present a few of its phases in a general way, trusting their consideration may not be unprofitable even though imperfectly presented.

Physiologists and the writers of text books on obstetrics, tell us that pregnancy is a physiologic process, and in normal conditions of health and under favorable environment, the gravid woman will pass through the period of uterogestation without discomfort and unaided by the ministrations of the physician.

*Read before the Des Moines Valley Medical Society, June, 1911.

This is doubtless true, but unfortunately in a considerable per cent. of women in all walks of life, these ideal conditions are becoming the exception rather than the rule, while in both extremes of the social scale, they can scarcely be said to exist.

The adjustment of human life to the artificial conditions which civilization imposes, has been a devitalizing process, and whatever the ultimate results of civilization maybe; whether it will eventually restore the lost advantages with the elimination of the disadvantages of primitive life, and produce a superior race of people, or exterminate them through race suicide and degeneracy, are questions on which we may speculate, but the future alone can answer. Be the answer what it may, the advantages we now enjoy are exacting a fearful toll in nerve energy, and nowhere is this more manifest than in the lowered vitality and increased nervousness of our women.

The demands of society in the higher walks of life, and the hardships and privations, incidental to the struggle for existence in the lower walks of life; coeducation; the emancipation of women from the tyranny of man, and consequently her occupation of the various industrial positions for which she is biologically unfitted to fill, are some of the factors which stand in a causative relation to the anemias and toxemias with their vicious train of nervous disorders for which the physician is daily consulted.

As a common experience, what is the condition found in a large per cent of our female patients? Constipation is the rule: deep breathing a lost art; and renal insufficiency will be found almost as often as looked for.

When pregnancy, with its increased demands on the various functions, is added to a condition in which elimination is already subnormal, we have a combination of factors operating, sufficient to account for most of the phenomena observed even in the more severe toxemias of pregnancy, without theorizing about placental ferments or other special toxins, about which so much has been said and so little proven.

It would be waste of time to attempt a review of the different theories which have been advanced in support of a special toxin as the cause of the severer forms of toxemia, especially eclampsia. It is sufficient to say while many of them have been very ingenious, and some quite plausible, yet most of them have been satisfactory only to their authors, and that a special toxin has not yet been found.

The morbid changes as observed by different investigators indicate the pathology is not constant but varies within wide limits, a fact difficult to reconcile with the special toxin theory.

E. P. Davis while admitting no special toxin has been found, yet thinks the cause is to be sought in the placenta and states the pathology of eclampsia is so definite that a diagnosis can be made post mortem without the clinical history.

In a joint paper read before the section of obstetrics and diseases of women, at the last meeting of the American Medical Association, Cragin and Hull agree with the pathological findings of Davis but say the same changes are produced by chloroform poisoning, a statement of considerable therapeutic significance if true, while Crockett writing in Jewett's text book on obstetrics, says the pathology is more than obscure.

So when one undertakes to review the literature on this subject and compare the theories, opinions, and conclusions of the different authorities, he will be fortunate indeed, if he does not arrive at a state of complete confusion. About the only definite conclusion I have been able to draw from a perusal of the literature available to me, is that what is definitely known is considerably less than the unknown, and that the facts are difficult to find.

In the autointoxication theory of Buchard, we at least find something which more satisfactorily explains the etiology and the various clinical manifestations than any that has yet been offered. By it we are best able to reconcile the differences in the pathologic findings of the different investigators and besides it furnishes the physician a rational working base.

Buchard has demonstrated that in the process of matabolism in non-pregnant states, a number of toxic principles are formed, some of which are antagonistic in action. He has found a convulsive, a narcotic and a cardiac depressant and another which when injected into animals produces degenerative changes in the liver, kidneys, spleen and blood vessels, differing in no respect from the pathologic changes Davis has found in eclampsia; and under eclampsia, Davis includes a variety of conditions not manifested by convulsive symptoms. He says "we may have eclampsia with a typical picture without convulsions. In such cases he states, the eclamptic seizure is manifested as a form of blood disintegration in which the poison may produce an anemia as marked as in pernicious anemia, or it may be manifested as an irritant poison to the blood vessels causing disintegration of their walls, or again as a type of acute degeneration of liver substance, simulating acute yellow atrophy. Changes as before mentioned, Buchard has been able to produce from a toxin formed in non-pregnant subjects, and Cragin and Hull have observed in chloroform poisoning, and it is a well known fact that acute yellow atrophy of the liver occurs independent of either of these factors.

When one or more of these toxins are retained or their relative proportions changed from one being eliminated more readily than another, it would require no great stretch of imagination to conceive how a variety of toxic symptoms would result, such as actually do occur in the toxemia of pregnancy.

So it seems there is much evidence to support the conclusion

that eclampsia, pernicious vomiting, and acute yellow atrophy of the liver are caused by the same toxins which produce the milder forms of toxemia and differ from them only in degree.

I shall offer but few suggestions in regard to the treatment, trusting that the details of that important phase of our subject will be brought out in the discussion, if this paper has the good fortune to be discussed.

Prevention here, as in all fields of medicine, is of prime importance, and while perhaps the results cannot be as accurately measured as in the infections, yet in no field of preventive medicine, will the well directed efforts of the physician be rewarded by more positive results.

Our duty to this class of patients does not begin and end with confinement and the sooner the physician realizes this and impresses upon his patient the necessity of careful supervision throughout the entire period of gestation, the less often he will be called on to treat the severe forms of toxemia.

The rules of hygiene as laid down in the books, should be faithfully carried out with such modifications as will best meet the individual needs.

Symptoms complained of which might be safely ignored in non pregnant conditions should here receive careful attention, bearing in mind that digestive disturbances, ptyalism, headaches, neuralgias, nervousness, increased arterial tension, albuminuria and many other symptoms, I need not mention, are now known to be of toxic origin.

Much valuable information will be obtained from frequent examinations of the urine. However much authorities may disagree on its other phases, they are pretty generally agreed that there is a definite relation between the form in which nitrogen is excreted and the degree of poisoning. Decreasing the formation of the toxins and increasing their elimination are the principles on which the condition is to be treated. The former will be best accomplished by careful regulation of the diet with special reference to the nitrogen intake. Many will promptly improve under rest and a milk diet; the latter by careful attention to all the organs of elimination, and in this he who is best able to select remedies appropriate to the individual case, will succeed best in its management. When medical treatment fails, as it sometimes will, the uterus should be emptied and without delay.

We desire to call the attention of the societies to the advisability of keeping the same man in as secretary as long as he will serve and as long as he will do faithful work. We know of some societies in which a new secretary is elected every year. This is a bad practice. We feel sure that a secretary will do better work when he is continued in office as long as he proves efficient. Elect the busiest, most enthusiastic man in the society as secretary and keep him at work. It will pay.

A BRIEF DISCUSSION OF PRE AND POST OPERATIVE TREATMENT.*

W. A. RÖHLF, M. D., Waverly, Iowa.

The first consideration is to have a clear indication for operation. The laity accept operations easily, because of so many brilliant results from surgery in general. It has been suggested that certain undesirable end results, at times, in the way of neuroses that have not been benefitted, but augmented, latent bad effects from adhesions and perhaps at times too radical procedures in the female pelvis, gastroenterostomies for drainage that need to be, and are, undone, would seem to indicate that, by some of us at least, more conservatism should be practiced before submitting our cases to the immediate or remote results of surgical procedures.

Having a clear indication for operation, careful investigation of all excretory functions, condition of the respiratory organs, the heart and vessels, should be made. The nose, mouth, throat, and even the teeth should be examined for infections to lessen the discomfort and danger from post-operation intestinal infections which are so common, so severe, and even occasionally dangerous.

The anesthetist is a more important factor in immediate and post-operative results than he is ordinarily accredited. None but the best qualified should be employed. The fact that the field of anesthesia is in a small way being specialized is encouraging, but the matter needs more consideration at the hands of our college teachers and the profession at large.

The anesthetic is often most dreaded by patient and surgeon alike—indeed frequently is the most, if not only danger connected with the operation. The skilled anesthetist, with his ability to hold the patient without too deep a narcosis and who can achieve all that is needed without using more of the anesthetic than necessary, who knows danger signals and the remedy, will do much to prevent post-operative complications and discomforts. Let us pay him better and give him the credit that is his due.

This may be a good time to discuss the hypodermic of morphin and atropin, administered before the anesthetic is started.

For all nervous cases it is quite generally used as a routine and there are those who use 1-6 grain morphia and 1-150 grain atropin for practically all cases. It places the patient in a condition of mental rest, takes away the keen edge of the fear and uneasiness, and, more important, does away largely with the over secretion of mucus so disagreeable to the surgeon and dangerous to the patient. It prolongs the rest period after the operation and in a substantial way decreases the tendency to shock.

The internal preparation of the patient. The ordinary routine of a cathartic, either of castor oil, epsom salts or calomel, or two

of them the day before operation, is probably free from objection, except in cases of intestinal obstruction, acute abdominal infections, or where the procedure might be contraindicated for special operation.

From observations in four large hospitals, the one where castor oil was used as the cathartic the previous day gas pains were less frequent and less severe than in those where epsom salts and calomel were used alone or in combination.

In the matter of skin preparation, to scrub or not to scrub. It has been demonstrated that the application of a ten per cent alcoholic tr. of iodine is an effective method of skin sterilization. The tendency to blister can be obviated by the use of a tincture not over ten days old. It would seem that farm house surgery is made less cumbersome by the iodine preparation of the skin. Some there are who claim perfect results with a good washing of the skin with benzine, and that alone, at the time of operation. However, in hospital practice, with all the materials and plenty of sterile water at hand, we prefer the more laborous method of washing with green soap, shaving, and rinsing with ether, alcohol, and 1 to 500 bichloride, or any of the many other methods advocated by surgeons that have proven effective. Simplicity of efficient technique is always desirable.

I do not believe that water should be withheld after operation even in cases of severe vomiting. Often a copious drink of hot water will relieve the extreme nausea and vomiting and make the retching and wretched distress less severe. In a minor degree, even here it controls the terrible thirst, but this can better be relieved by large amounts of normal saline given by the drop, method—per rectum. The contrast between the patient who is absorbing large amounts of fluid and the one who is denied them in any form, is certainly very great. Unless there is some special contraindication, this method of injecting large quantities of fluid is advised as a routine for the patient's comfort and to aid elimination.

Post-operative vomiting often baffles all efforts to relieve. The careful preparation of the patient as to bowels, saturation with plenty of sterile water, cleansing of mouth, nose and teeth, and the skilful administration of the anesthetic will do much to prevent this distressing condition. The most effective remedy is gastric lavage with sterile water, repeated in a few hours if necessary. Drugs seem to have little effect: cerium oxalate, bi carbonate of soda, aromatic spirits of ammonia, bismuth sub nit., inhalations of vinegar, sips of hot water, coffee, tea, iced champagne, etc. The efficient remedy is stomach lavage. It is also a prophylactic against that terrible post-operative complication known as acute stomach dilatation.

The surroundings during the recovery period should be as quiet as possible and everybody excluded from the room except the nurse. Argument with a patient that is very restless or hysterical at this time, is useless, and restraint should be only sufficient to prevent self injury. Fresh air in abundance should be allowed and care exercised as to sudden changes of temperature; sudden chilling of a perspiring patient may be followed by pneumonia, perhaps accredited to ether inhalation. Morphin and atropin given before operation will largely decrease the number of ether pneumonias.

The danger from renal complications will be greatly lessened by ingestion of fluids before operation and liquid diet for the first few days after.

Acute dilatation of the stomach, a post-operative condition that is not frequent, yet does occur sufficiently often, and with fearful effects, unless properly and promptly treated, that I wish to mention it. The symptoms are those of distension, mostly in the upper abdomen, with frequent vomiting of large quantities of yellowish, brownish and then blackish fluid, associated with sub-normal temperature, rapid pulse, quick, shallow breathing, clammy skin, anxious expression, a picture of threatening collapse. The frequent use of the stomach pump is perhaps the only, but fortunately, very effective remedy. I beg your indulgence for reporting my first recognized case. Mrs. D., age 33, operated for tubal miscarriage, an unruptured sac removed together with a large amount of clotted blood. Operation lasted twenty-five minutes. Thirty-six hours after we were hastily summoned to the hospital and found the patient with pulse 150, temperature 98, respiration 40, anxious facial expression, cold clammy skin, restless, agonizing abdominal distress with distension, nausea, had just vomited a quart or more of brownish fluid.

Our first thought was of hemorrhage, but the normal color of conjunctiva and lips disproved that.

Having read only a few days previous that able article in the *Annals of Surgery* by Walter S. Laffer, I felt that I had a case of acute stomach dilatation. The use of the stomach tube gave what seemed miraculous relief. We had to wash the stomach about six times during the next thirty-six hours, and the case promptly recovered.

A word as to catheterization. Unless some special contraindication exists from the nature of the operation, the catheter should not be used before twelve to sixteen, or even twenty hours after operating, the bladder having been emptied just prior thereto. Every known method to induce urination should first be tried, even to letting the patient up and on a receptacle before restoring to the catheter, even in plastic work on the perineum and urethra.

I do not wish to discuss drainage with reference to special

operations or pathology. But, to bring the matter of drainage before the society, and into the general discussion, I wish only to say that when indicated, drain thoroughly the most dependent portion of the wound, the lowest part of any cavity, and use position to aid the drains. Avoid gauze drains in contact with tissue lest adhesions result that could be avoided by rubber tissue wrapped about the gauze.

Several other phases of the subject could be discussed, such as feeding, position, movements in bed or out of it within the first few hours or days following abdominal operations, but I will close this paper with a brief recapitulation.

- 1st. Have a clear indication for operation.
- 2nd. Employ the best anesthetist obtainable.
- 3rd. Use small dose of morphin and atropin before operation.
- 4th. Saturate patient with fluids before and after operation.
- 5th. Gastric lavage is the most efficient remedy for post-operative vomiting and should be more frequently used.
- 6th. Gastric lavage will prevent acute stomach dilatation and is the best remedy when present.
- 7th. The catheter should be used only when all other methods have failed and not before twelve to sixteen hours unless specially indicated.
- 8th. Drain when in doubt, but thoroughly if at all, and avoid gauze when it might cause adhesions.

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DISTENDED BLADDER SIMULATING APPENDICEAL ABSCESS.

CHARLES ENFIELD, M. D., Jefferson, Ia.

Recently I was called to operate a case in which a tumor had suddenly developed in the abdomen, but it was thought to a perforated appendix. Hastily getting together what I thought necessary, I reached the bedside of a ten year old girl. There was a history of enteritis, in no way alarming, until on examining the abdomen, about the eighth day, the doctor discovered a tumor, tensely held, occupying the lower segment. There had then been severe pain and tenderness for twelve hours. No feces or gas had passed during that time. The temperature however had been normal.

Putting the patient on the table, it was thought advisable to empty the bladder as the outline of the mass suggested a distention of that organ. Such proved to be the case, as the withdrawal of a considerable quantity of urine premanently relieved all symptoms.

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Mystery, The Key-Note of Quackery.

Mystery being the key-note of quackery, quackdom will flourish in proportion to the mystery with which it is permitted to surround itself, its methods and particularly the "remedies" which are employed. In the past it has flourished unhindered because there were none who could dispell this secrecy. But now two potent factors are at work—the United States Government in the shape of the Food and Drug Acts and the American Medical Association with its Council on Pharmacy and Chemistry and its Chemical Laboratory.

The effect which the reports of the Association's chemical laboratory is having on quacks and quackery is well illustrated by a report of a committee of the Buncombe County, N. C., Medical Society. From the report, which was recently published in the Journal of the American Medical Association, Nov. 4, 1911, p. 1553, it is seen that a fake medical concern was driven from Asheville on the evidence brought out by the analysis of a "gall-stone cure" which this laboratory exposed and which was made use of by fakers. Truth is the doom of quacks.

Medicine Under Difficulties.

An intensely dramatic incident in life in the northern wilds of this continent has recently been reported. At Fort Hope one of the northernmost stations of the Hudson Bay Company, where the few residents of the white race are cut off from civilization the whole year round, Harry McPherson and his wife have been sustaining the rigors of climate and hazards of isolation in that wild

region. The wife was taken ill and the husband with that rough and ready knowledge of a great variety of things which is forced on people who are left entirely to their own resources in such a situation diagnosed the stricken woman's ailment as appendicitis. McPherson had no more knowledge of surgery than comes to a man accustomed to giving "first aid" to such injured Indians, half-breeds and whites as need attention by reason of the ordinary accidents occurring at a fur station. He knew, however, that instant action was necessary to save the beloved wife. With splendid courage and nerved by a devotion which inspires the great majority of men in the martial relation, he made the incision and removed the vermiform appendix with no other instrument than the "first aid" kit. This desperate remedy for a desperate disease appears to have been crowned with success, but the dreadful difficulties of the case were not yet over. Nepigon, the nearest settlement having a hospital, was 200 miles to the south. Transportation of the patient could be made by canoe and portage. For this journey the woman was prepared and ten Indians were employed for the expedition. At one point the sufferer was carried by the Indians for 13 miles over difficult ground. Finally she was lodged in the hospital at Nepigon. Husband and wife manifested heroic bravery which must have evoked a thrill of admiration in every human breast. Think of the woman who submitted herself to that crude surgery in an operation which might have meant immediate death at the hands of her husband. There was no anesthetic, no other anodyne than loving confidence that the husband would do his best.

The Journal of the Indiana State Medical Association, Oct., 1911.

The Cancer Problem.

A paper read at a public meeting of the Mifflin County Medical Society, Pa., by Dr. Donald Guthrie, is suggestive of a more thoughtful consideration of one of the most serious problems before the general public. It is more serious than the tuberculosis problem, which has been so thoroughly discussed in what we do not know the cause of cancer, or of any means of arresting its development save by operative treatment. The certain and definite knowledge we now have of the cause of tuberculosis "the modes of the germ entering the body, its varying methods of attack and the causes of death from the disease. Up to a few years ago what the public learned of the disease was through advertising of patent medicines, promoters of health resorts and the exaggerated statements of irregular practitioners. Today tuberculosis is gradually being controlled and the percentage of deaths is yearly being lessened."

The difficulty of conducting a campaign of education in relation to cancer lies in the fact that we have nothing to offer to

the public except the dreaded operative treatment but such as we have the public is entitled to. The educational process is not confined to the general public alone but to the profession as well. Are we as a profession doing all that can be done to lessen the fatalities from cancer? We think not. It is freely admitted that laboratory investigation has thus far given us but little positive information but a good deal has been accomplished in a negative way; that is, many plausible theories have been disproved and we are thus kept in line for the truth which will be no doubt worked out through a combination of clinical and laboratory methods. Certain things have been determined clinically. It is known that carcinomas occur much more frequently in the decline of life and in organs that are physiologically active. Nutritive activity and physiological activity go close together and it may be that the inter-relations of high nutritive and high physiological activities and the decline of functional activity after the age of 45 or 50 years of age, are important influences in the presence of certain other factors in producing cancer. It is found that 70 per cent of cancers of the stomach appear in chronic ulcers and that a large per-cent of cancers of the gall bladder appear in the presence of gall stones, that cancers of the mammary gland and uterus appear soon after the cessation of active function and during the retrogressive process. In other words, degenerative processes associated with chronic irritation are the most productive causes of cancer.

The clinical and statistical study of the frequency of cancer in different organs is of great importance and tends to emphasize the inter-relations above referred to; of nutritional and functional activity and the influence of chronic irritation. An interesting paper on this subject is published by Dr. Leo Loeb in the July, 1911 number of the Journal of the Missouri State Medical Association. Dr. Loeb shows that the mortality from cancer in England and Wales is three times greater than it was 50 years ago; "that one out of 15 to 20 men and one out of 9 to 12 women who reach the age of 35 eventually die of cancer." Roger Williams has shown that cancer is more frequent in some countries than in others; he claims that the people who live the best suffer most from cancer and that apparently the conditions of living which favor a decrease in tuberculosis to nearly the same degree favor increase of cancer.

The positive knowledge then we have of cancer comes from clinical study. It is established that chronic irritation in organs of high functional activity stands as the most important exciting cause; statistical study has furnished us valuable information as to the relative frequency of the disease in different organs, and we are now in possession of data which enables us to say what should be done, and what our teaching of the public should be. In chronic ulcers of the stomach it should be our duty to impress upon our

patient the importance of an early operation. It has been clearly established that chronic ulcers do not often heal either spontaneously or by the use of medicine, and it is impossible to say what potentialities for cancer may reside in that ulcer. All tumors of the breast should be removed, in young persons by a simple operation if it is satisfactorily shown that the growth is not of a malignant type; by a radical operation if this cannot be determined. Most tumors of the breast after 40 years of age should be removed by radical operation unless it can be positively proven that the growth is not malignant. All growths of epithelial structures should be regarded as possessing the potentials of malignancy. Ulcers of the uterine cervix, persistent hemorrhages from the body of the uterus should be regarded as surgical. The most inexcusable thing the practitioner of medicine can be guilty of is the waiting until a clear clinical diagnosis of cancer can be made. The public should be instructed in this matter and the dangers of waiting for the danger signs. There is positively no way to lessen the great number of deaths from cancer except by this kind of watchfulness, and the results, are so good for permanent recovery when the diseased structures are beginning to show the cancer cell arrangement, from operation, and the results so bad from delay. D. S. Fairchild.

“The Chaddock Sign”, or the External Malleolar Sign.

Neurologists are accustomed to employ for the sake of convenience certain terms to express groups of symptoms reflex in character, which would be otherwise expressed in somewhat lengthy descriptions, for example Romberg Sign, Argyle Robertson Pupil, Babinski sign, etc. The significance of these “signs” is very great. Through masterful study scholarly men have been able to work out in the man the changes which have taken place in the spinal cord and brain to produce the symptoms thus grouped, and when in the course of an examination these signs are brought out the diagnosis is made with a greater degree of certainty than in most any other branch of medicine in all of what are generally designated as systematised diseases of the central nervous system.

Dr. Chaddock of St. Louis has brought a new sign which in courtesy to the author should be called “The Chaddock Sign”. Dr. Chaddock in a paper published in “The Journal of the Missouri State Medical Association”, described the signs as follows: “The sign in question consists of extension of one or more or all of the toes with or without fanning of them, when the external inframalleolar skin is irritated. This phenomenon, I believe like the well known sign of Babinski, indicates organic disease of the spino-cortical reflex paths.”

To determine the absence or presence of this sign, the follow-

ing procedures have been employed; with the patient in bed on the back, the lower limbs relaxed and extended, and wholly exposed, the soles and the ankles are readily accessible for the experiment. If possible the limb to be tested should not be compressed or touched in any way except at the point chosen for the application of the stimulus. With the patient lying on the side, they may be bent at the knee; and by changing sides each malleolus is made accessible. Relaxation of the muscles of the leg and feet is very essential for the test for reflexes in general. When the patient can be examined sitting in a chair, the most convenient and satisfactory position and condition of the limb are obtained by having the limb to be examined resting on the examiner's knee, so that the limb is supported at the lower portion of the calf muscles. The examiner can change from one side of the patient to the other, thus seeing perfectly from the external aspect, the ankle, foot and toes. This position permits the most accurate observation of the toe movements and perfect control of the point irritated, and of the intensity of the stimulus applied."

"The irritation of the skin is best done with a rather dull steel point. The area to be tested is the groove which outlines the external malleolus. In this groove, the point of the instrument used should be drawn from behind forward until the depression seems to be the most excitable point of the area; but sometimes the posterior edge of the malleolus, is the most excitable point. The degree of irritation applied should always be varied from a slight stroking to rather severe scratching with considerable pressure, though it is never necessary to abrade the skin or cause actual pain. Normally this stimulus causes no movement whatever of the toes; it however in some cases causes reflex contraction of the thigh muscles exactly like that observed normally when the sole of the foot is similarly irritated. The abnormal reaction consists of extension or fanning of one or more or all of the toes; I am also convinced that a movement of flexion observed in a few cases which were otherwise shown to have organic disease of the central nervous system, had the same pathological significance as extension had in other cases."

The value of the Chaddock sign in diagnosis is the same as the Babinski except that in cases presenting no Babinski or a doubtful Babinski, Chaddock has found the external malleolar sign reliable as indicative of cerebral lesion, proved by operation with disappearance after operation. Chaddock states he has seen it often in the absence of the Babinski sign in chronic cerebral conditions but has never seen it in a normal individual. He has found it "without Babinski in general paralysis, in skull fractures, intransitory unilateral brain lesions, in old hemiplegias, and in indeterminate brain lesions, single and double, and in cord lesions; never in peripheral lesions or in unmixed frank tabes.

In conclusion Dr. Chaddock says: "If my studies of this sign prove to be sound, I can foresee considerable use for it in diagnosis. It adds one more means of distinguishing with certainty between organic and functional hemiplegia, especially owing to its bilateral occurrence in the organic condition; it may ultimately reveal the severity, if not the nature, of a pathologic brain process; it may be, after more careful study of its variations and associations, an aid in distinguishing between brain and cord lesions in some cases; it may help in deciding the often difficult question of the existence of dementia paralytica; it may serve to separate early organic dementia precox from more hopeful varieties of this common affection and help to reconcile the divergent views of this form of mental disease which psychiatrists now entertain; it may serve to reveal the serious brain state of the chronic alcoholic, of the luetic, of the epileptic, and thus add precision to diagnosis and give guidance in treatment. It seems destined to be of great importance as a help to the surgeon in cranial injuries, where often the existence of fracture and intracranial damage remains in doubt until such signs as that of Babinski come to give the unequivocal answer; and finally, in cases of intracranial tumors, it will be an aid to early diagnosis." D. S. Fairchild.

Typhoid Fever at Cedar Falls.

An epidemic of Typhoid Fever has appeared at Cedar Falls. It is reported that about 100 cases have occurred. The origin of this outbreak is not definitely known. We are informed "that the date of infection coincides exactly with the first high water in the Cedar River", and that "the river flooded a nearby spring which is the city's water intake." This is an old, old story told over and over again with almost the same effect; that as soon as the immediate danger is over and the victims are out of sight, the good people prayerfully accepting the "visitation of Providence" return to their money making forgetting there is a body of men (appointed it is true in a most vicious way) but nevertheless ready, waiting, for the authority and money from the state, to watch over the health interests of the people. A hundred cases of typhoid fever and two deaths thus far. What would a hundred or two hundred thousand dollars be to the people of Iowa if a body of experts under the direction of a central authority at the Capitol City were always watching for the things that have happened at Cedar Falls? Suppose the law required (as it should) the reporting of cases of typhoid fever to the Secretary of the State Board, what good would it do; the mischief is already done, the germs are already in the victim's system and no action of the Board can stop them. Our State Board of Health is a capable, honest, and patriotic body of men willing and able to protect us

against infectious diseases, but we refuse to permit them to do it, we are not a stingy and penurious people, but indifferent. Must we constantly invite such visitations? Can we reconcile ourselves to merely offering condolence to the unfortunates when we are responsible by our neglect for the calamity? No, there is a better way. Let us join in pushing radical measures to the extent of furnishing our Board of Health with power and money to establish a system of inspection in order that we may anticipate and prevent these unfortunate occurrences. Our own health, our family's our friend's and our people's health is too sacred to be left to chance of the germs of infection turning the other way. The able secretary of our Board of Health is deeply grieved at the helplessness of his position. We are assured that no official notification of the Cedar Falls incident reached him. The information reached him only indirectly, but with characteristic energy, he is pushing every means at his command to relieve the situation. He earnestly requests that physicians in all parts of the state report to him every case of typhoid fever coming under his notice. No new cases are developing at Cedar Falls but no one can tell from the very nature of things when the end will be. It should be noted "that Dr. Grover of the Pathological Department of the State University spent a week in Cedar Falls investigating the conditions and that he will soon make a report."

Dr. G. H. Summer, Des Moines, Iowa:

Dear Doctor: Regarding the typhoid epidemic at Cedar Falls I wish to say that by process of elimination the cause would seem to be a polluted city water supply about the middle of October. At that time the Cedar River was unusually high following a dry season. The water was high enough at that time to flood the springs which are the intake of the Cedar Falls water supply. Cases of fever began two weeks after the high water and are limited to a period of about ten days. It seems to me the source of the infection was without doubt the city water supply as practically all cases have used more or less city water while but a very small portion of cases were using any other food or drink from a common source. The epidemic is under perfect control and I don't believe that there will be any more cases except a few scattering ones of secondary infection. Physicians and health authorities are all cooperating and as a result the epidemic is rapidly abating. I fully expect that by January 1st Cedar Falls will have less than one half dozen cases of typhoid fever. Under precautions which are being taken I believe that Cedar Falls people and Normal college students are much less liable to take the disease than are Iowa inhabitants living outside of Cedar falls.

Yours very truly,
T. U. McMANUS.

Sometime during the year we expect to publish a roster of the state society, by counties, to include a list of all officers and time and place of county and district meetings. We have much of this information ready at the present time.

MEDICINE IN IOWA FROM ITS EARLY SETTLEMENT TO 1876.

D. S. FAIRCHILD, M. D., Clinton, Iowa.

Continued from the November Journal.

Johnson County.

Dr. Frederick Lloyd of Iowa City furnished very full and inter-biographical sketches of the early physicians who practiced in Johnson County. What he said in relation to Johnson County Medical Society and the histories of her pioneer physicians will be related in his own language.

“It was at the meeting of the physicians of Iowa City to attend the funeral of Dr. Morse, (August, 1855), that the Johnson County Medical Society had its first inception. It was soon after organized and flourished for many years until in 1869, dissensions, the ban of medical organizations, took place in it and a division followed which resulted in the incorporation of the society by a respectable part of the membership which formed the dissenting minority. The incorporated society maintains its organization (1875) while the other has recently performed its last official act by declaring in a published form its own dissolution.

Pioneer Physicians.

Dr. Henry Murry born in Dublin, Ireland, 1816, a graduate of the Medical Department of the University of Louisville, Ky., was the first physician to settle within the present limits of Johnson County. He came to what is now Iowa City in the autumn of 1839 where he has ever since been actively engaged in the practice of his profession (1875), is now coroner and county physician. He has performed many capital operations and has enjoyed an extensive practice.

Dr. Ezra Bliss was born in New England, graduated from the Castleton, Vermont, Medical College, was the second physician to locate in Iowa City, coming also in 1839. After a number of years of successful practice, he removed east and is now (1875) a retired citizen of New York City but spends most of his time in Europe.

Dr. Jess Bowen was born in Virginia about 1806, came from Indiana (where he had been a state senator) to Iowa City in 1840. He has not been in active practice for many years. Previous to the he was elected to the Legislature as a senator from Johnson County, his term beginning in 1860, with the Seventh General Assembly. At the breaking of the Rebellion, he was Adjutant General of the state. He was afterwards appointed Paymaster in the U. S. Army and was the last Paymaster to be mustered out of the service. He is still a resident of Johnson County (1875).

Dr. S. M. Ballard was born in Virginia about 1812, came from Ohio to Iowa City in 1842. He was from the Medical College of Ohio. In 1854, he abandoned the practice of medicine and removed to

Audubon County, Iowa, where he is engaged in agriculture on a large scale (1875). It was Dr. Ballard who nominated Kirkwood in the Republican State Convention for a third term as governor and thus secured Governor Kirkwood's success as a candidate for U. S. senator. On account of his gigantic stature and the size of his nose, he was familiarly known by the title of "Big Medicine."

Dr. M. J. Johnson was born in Jefferson County, New York, about 1815, and a graduate of the Medical Department of the University of New York, came to Iowa City in 1846. He had previously practiced eleven years in Ohio and after ten years practice in Iowa City, retired on a full competency to an elegant home adjoining Iowa City, where he still resides (1875).

Dr. Wm. McCormick was one of the very early settlers of Iowa City where he studied and practiced a few years. About 1850, he went to California where he is still living.

Dr. George D. Grosthwait a native of Tennessee and a graduate of the Nashville Medical School, settled in Iowa City in 1850. In 1852, he was elected state senator for the district then composed of Iowa and Johnson Counties. Before the close of the Rebellion, he returned to Tennessee where he died at the age of 55.

Dr. Jacob H. Early was born in Pennsylvania about 1830, was educated in medicine at the Medical Department of the University of Pennsylvania and made his first essay in practice at Iowa City in 1856. In 1862 he was appointed surgeon of the 17th Iowa Vol. After the war he removed to Palmyra, Mo., where he is still practicing (1875).

Dr. Wm. H. White of New York birth and education, a nephew of the formerly well known surgeon of the same name of Cherry Valley, N. Y., came to Iowa City in 1852 when about 30 years of age. He is the best operating surgeon that ever located in East Central Iowa (Dr. Lloyd in 1876). Dr. White was the first surgeon ever commissioned to an Iowa regiment; took the field in May 1861 with the First Iowa Infantry and as surgeon of this regiment, was the chief operator in the field at the battle of Wilson's Creek. He afterwards became surgeon of the 22nd Iowa Infantry. He is now a leading physician and citizen of Atlanta, Georgia (1876).

Dr. T. S. Mahan, a Marylander by birth and an Ohian by education, settled in Iowa City in April, 1854, where he is engaged in an active and successful practice (1876).

Dr. J. C. Stone of New England birth, a graduate of one of the St. Louis medical schools, came to Iowa City in November, 1854. His popularity as a physician and surgeon while here was unexcelled. At the breaking out of the war he enlisted in the ranks of the First Iowa Cavalry, but was soon picked out for promotion on the General Staff as Assistant Adjutant General with rank of Cap-

tain. At the close of the war, he settled in Burlington, Iowa, where he is now (1876) one of the most prominent surgeons of that section and is a prominent candidate for Congress in the 1st Congressional District. While at Iowa City, he performed many capital operations.

Dr. M. B. Cochran, born in Cambridge, Vermont, a graduate of the Western Reserve Medical College of the class of 1851, settled in Iowa City in 1853. At that time, he was 26 years of age. He was appointed Surgeon of the First Iowa Cavalry at the time of its organization and afterwards by appointment of the President, was Surgeon of Volunteers, serving through the entire war.

Dr. Arnold C. Moon was born in New York in 1816. Graduated at the Albany Medical College in the class of 1842. Came from Ohio to Iowa City in 1856 where he is still actively engaged in the practice of his profession (1876).

Dr. E. W. Lake was born in Ohio about 1810, graduated from the Ohio Medical College. He came to Iowa City in 1852 where he continued to practice until about 1860 when he removed to Marion, Iowa, where in 1876 he was still residing.

Dr. C. A. White, a native of New England and a graduate of one of the Chicago Schools of medicine, located in Iowa City during the war. In 1866, he was appointed by the Legislature, State Geologist, and by the next subsequent legislature reappointed for a second term. The results of his explorations and surveys have been published by the state in two large volumes. Before his work as State Geologist was finished, he was elected Professor of Natural History in the State University of Iowa, a position he relinquished to take a like chair in Bowdoin College, Brunswick, Maine. After a few years he resigned to accept a position in the scientific corps of the Smithsonian Institution at Washington.

Dr. Dwight C. Dewey was born in Turin, Lewis County, N. Y. about 1830, graduated from one of the medical schools of that state, settled in Iowa City in 1859. Soon after he was appointed Assistant Physician to the Insane Hospital at Mount Pleasant when opened for the reception of patients in 1860. He remained in this position until the close of the war, when he returned to his native place where he died in 1875. Dr. Dewey was an ardent student, high minded, honorable and cultivated; devoted to the profession of medicine.

Dr. Bell, a native of New York and a graduate of one of her medical schools, came to Iowa City in 1844 where he died in 1846. He had perhaps the largest practice of any physician of the place up to the time of his death.

Dr. J. G. Hewey of Kentucky came to Iowa City in 1841 and is now in Missouri (1875).

Dr. Nathan G. Sales of Ohio came to Iowa City in 1845. He now lives in Colorado.

Dr. Henry St. George Coe, a native of Virginia and a graduate of the Medical Department of the University of Louisville, Ky., came to Iowa City about the year 1841 where he died in 1846.

Dr. Silas C. Swan, a native of New York and a graduate of a Chicago Medical School, came to Iowa City in 1839 where he died in 1845.

Dr. Simpson R. Crummy, a native of Ohio, came to Iowa City in 1844 where he died in 1853.

Dr. William Vogt, a native of Prussia, began the practice of medicine at Iowa City in 1848. He was a slender young man then who had only partially acquired the English tongue, but he soon attracted friends and patients. His services were of the most satisfactory nature to his clients. With more business tact, he might have accumulated wealth, but he never presented a bill or claimed a fee. His professional conduct was truly modest after that of the great prototype Hippocrates, and if ancient customs now prevailed I dare say that the grateful people of his adopted city would be ready to accord him the same honors that Athens rendered Hippocrates when the Herald proclaimed that the people of Athens had accorded him a golden crown as a mark of acknowledgement for his services of the state during the pestilence. Dr. Vogt died suddenly at his home in Iowa City in August 1873, age about 55 years, after an unremitted practice of 25 years.

Dr. John J. Sanders, a native of Indiana, and a graduate of the Western Reserve Medical College in 1850, began practice in Iowa City where his youth had been spent. His case proved the truth of the proverb by the exception that a man is never a prophet in his own country, for he was soon recognized as a skillful practitioner and enjoyed for many years a large and remunerative practice. He served during the war in the First Iowa Cavalry. His health from this service became permanently impaired. He died at his home in Iowa City in September 1874. He had a noble heart whose every throb was a generous impulse, unselfish, ambitious, a stranger to professional jealousy, his virtues were his weakness.

Dr. Wm. Morrow Knox, a son of the late celebrated New York divine of that name, was born in New York and graduated from the College of Physicians and Surgeons of New York, practiced for a short time in Iowa City, coming here in 1857. He died at Louisville, Ky., in 1862 while serving as surgeon of a regiment of Union Volunteers, age about 30 years. Dr. Knox was a gentleman of unusual acquirements and polish, and left many friends in Iowa.

Dr. James H. Boucher was born in New York about 1828 and graduated from Jefferson Medical College in 1855; came to Iowa in the latter year. On the formation of the 13th Iowa Infantry in November 1861, he was appointed its assistant surgeon but was soon after promoted by President Lincoln to Brigade Surgeon. Upon

the organization of the western troops into corps, he was appointed on Gen. McPherson's staff, Medical Director of the 17th Army Corps, a post he held longer than any other corps medical director during the entire war. When his corps was mustered out of service at the close of the war, he was appointed Medical Director of the Department of Georgia and "for faithful and meritorious services" received the Brevet rank of Colonel. When the Department of Georgia was merged into another he was honorably mustered out of service.

On the formation of the Medical Department of the State University, Dr. Boucher was appointed to the Chair of Anatomy which position he held for one year.

Dr. Boucher was indefatigable in the pursuit of his profession, conscientious in the performance of difficult surgery and a bold adopter, if not originator of new methods. His practice, largely surgical, had become by far more lucrative than that of any medical man in Iowa outside the larger river cities, but in the midst of his success, misfortunes came with a physical organization which might be taken as a guaranty of ninety years of life, he succumbed to the effects of western medical practice when only forty-five. In September 1873, his wife died suddenly while absent from home on a visit. Soon after, his own and his elder son's health failed, he secured an appointment in the Medical Department of the U. S. Army which led him to California. Soon after reaching California, the son, (a young man of 22) died there his own disease ("cardiac dropsy") had hopelessly progressed and in the last part of April, 1874, death ended his career. Father and son dead returned together as they had set out together living, and were buried together by the side of the wife and mother in the cemetery at Iowa City, leaving of a whole family, but one member (a son) to mourn.

Dr. John A. Morse, a graduate of Ann Arbor Medical School but a native of New York, located in Iowa City in 1853. He was a young man of 26, of graceful and attractive person, devoted, enthusiastically to the surgical side of his profession for which he had a keen eye and an adroit hand and in which he gave promise of a distinguished career but possessing a frail constitution, death overtook him at the very threshold of success.

Malarial disease made sad ravages on his delicate constitution but his friends and attendants congratulated him on approaching convalescence, for it was not to be presumed a disease not then prevailing and which spends its fury mostly on adolescents, would suddenly appear upon the scene as if generated by the fates for that fell occasion. But so it was. The measles attacked him in his convalescence, and secured him to the harvest of Death in August, 1855. It was at the meeting of the physicians of Iowa City to attend his

funeral that the Johnson County Medical Society has its first inception.

Miss Elizabeth Hess was born in Bellview, Ohio, 1845. At an early age she formed the determination to study medicine but found it impossible to do so until after her removal to Iowa. She graduated from the normal department of the Iowa State University and was enrolled among Iowa's teachers. In 1872 she entered the medical department of the State University and after completing the course satisfactorily engaged in the practice of medicine at Iowa City, where she is rapidly (1876) making herself a favorite with the public and the profession, by her lady-like behavior and skillful practice.

Dr. Elmer F. Clapp, born in Saint Lawrence Co., New York, 1843, graduated from Bellevue Hospital Medical College, New York City. Among the operations performed by him was one case of lithotomy, which recovered; operation for strangulated femoral hernia, with recovery; removal of mammary gland, amputation of thigh (two cases) with recovery; ankylosis of knee joint, five times with the following results: two recovered with complete use of joint movements, two with slightly impaired motion and one with stiff joints.

Dr. R. W. Pryce, was born in Ebensburg, Cambria County, Pennsylvania, May 5, 1842. After enjoying the advantages of a common school education, he entered Oberlin College in 1858, remaining at this institution until the outbreak of the Rebellion, when he entered the Union Army and served during the war. In 1865 he began the study of medicine under the direction of Dr. George M. Graham, of Port Royal, Juinette County, Pennsylvania; attended a thorough course of medical lectures at the Jefferson Medical College, Philadelphia, and graduated March 10, 1868. Commenced the practice of medicine at Iowa City on the 14th day of July, 1868, where he resides (1876). At the organization of the medical department of the Iowa State University in 1871, he was appointed prosector to the chair of surgery, which position he holds at the present time. He is a member of the state and Iowa City Medical Society and enjoys a large and constantly increasing practice (1876).

Dr. Frederick Lloyd was born in England, May 24, 1826, and graduated from the Medical Department of Transylvania University Lexington, Kentucky, class of 1851. After practicing in New Albany, Indiana, and Peoria County, Ill., he came to Iowa City in 1854, where he was still practicing in 1876. In 1857-58, he was county physician of Johnson County and again in 1866-67. In 1873 he was a third time appointed to the same position, and from 1870 to the present time (1876) was a member of the Board of Insane Commissioners of Johnson County, and from 1872 was pension examiner. In Oct. 1861, Dr. Lloyd was appointed assistant surgeon of the 11th Iowa Infantry

and served with it in the field until June 1862, when he was appointed surgeon of the 16th Iowa Infantry, with which regiment he served in the field until August 1863 when he was appointed assistant surgeon of volunteers by the President. In Nov. 1863, he was promoted surgeon of volunteers in which capacity he served until after the close of the war. In 1865 was honorably mustered out with the brevet rank of Lieutenant Colonel (for faithful and meritorious services). Dr. Lloyd's services in the field embraced the battles of Shiloh, Iuka, and Corinth, the Siege of Vicksburg, the Atlanta Campaign, the Campaign against Hood in the rear of Atlanta and the March to the Sea, and included almost every position assigned to any surgeon. Besides serving with regiments, he had at times charge of field and post hospitals at Memphis, Savanna, and Camp Nelson, Kentucky. In addition he was acting chief surgeon of a division and acting medical director of a corps.

While residing in Indiana, he became a member of the Indiana State Medical Society and in 1857 was elected member of the Iowa State Medical Society. He became a member of the Johnson County Medical Society at its organization and was for many years its secretary. When the Johnson County Society split, Dr. Lloyd found himself with that faction which incorporated and was elected its secretary which position he still holds (1876). During his service as an army surgeon, he performed most of the capital amputations and resections. Dr. Lloyd was twice elected secretary of the Iowa City School Board and for eight years, was corresponding secretary of the Iowa Historical Society, a position which he still occupied in 1876.

Epidemic Diseases.

With perhaps the exception of an epidemic of Asiatic Cholera, in July, August and September, 1855, and of small pox in 1863 and again in 1875, no disease has prevailed in Iowa City or Johnson County not common at the same time to other portions of Iowa. Three cases of hydrophobia occurred in the County. The first, a blacksmith, bitten by a rabid dog, in March or April, 1858. The disease manifested itself in a few days after the bite. The second was in the person of a German woman bitten by a pup. The disease appeared in a few days after she had been bitten. The third case was an Irish woman about 40, married, but childless, bitten by her own dog in the neck while attempting to relieve what she supposed was a choking fit in the dog, introducing her finger into the animal's throat to extract a bone. The dog was then discovered to be rabid and she repaired to the "Mad Stone" in Lisbon, Linn County, and was promised immunity from the consequences of the bite. Soon after, on account of mental distress, rising from symptoms apprehended to be those of hydrophobia she made a second visit to Linn

County and had the "Mad Stone" reapplied and then came home fully satisfied. However in March, 1866, five months after the bite was received, the disease appeared and she died on the 4th day. All these cases died.

Memoir.

The death of Dr. L. J. Baker has taken from the community one of the best known physicians of the state. Beginning his medical career with a good preliminary education, he never ceased to be a student and during his earlier years when his work was lighter stored his mind with a fund of knowledge upon which he was ever wont to draw for the benefit of his patients. A student in the truest sense giving many weary hours of the day and often night to the study of those subjects which he felt would aid him in his efforts to relieve suffering and prolong life. No subject was so abstruse, no technique so difficult but he would undertake to master it. In fact it was his ambition and his delight to be the pioneer who broke new soil and brought to the relief of humanity those aids which an unfolding science offers. In his professional life he was a man of honor, medical ethics were to him a binding law which he never shirked or tried to evade. Ever careful of the feelings of his professional brethren he went directly to his duty without leniency or levity on the one hand or severity on the other. Punctual in time he demanded punctuality. Courteous himself, he was sensitive to discourtesy; yet withal he had the happy faculty of blending mercy with justice in his dealings with his fellow practitioners and so won their respect and love.

The Ottumwa hospital owes much to Dr. Baker. Especially during its early years was his aid freely given and of a kind to be of lasting benefit. Always ready by word and pen as well as with his means to encourage and assist the institution and its management his name must always be held in loving memory by those who have its interest at heart.

The life of Dr. Baker was filled with so many incidents in which the health and welfare of the community were the objects of his solicitude that it was an endless task to attempt to recite them. One service however, which he rendered the community should not pass unnoticed and that is his term of four years as health officer. In that short time he raised the department of health of the city from a worthless makeshift to a high order. He laid the foundation for an effectual working department, with complete and detailed records, careful inspection and effective quarantine. He also was the author of the bacteriological and microscopic work of the department and that at a time when only a few of the larger cities undertook such work. To him must be given the credit for making Ottumwa noted for its advanced position in guarding and protecting the lives of its citizens. His labors were unselfish since he really profited by them. Probably Dr. Baker's greatest fault was his generosity. No worthy cause appealed in vain. To the hospital, the medical society, the health department, the schools and other public matters he gave freely of his time. On every occasion when the call of humanity came to him he held out a most generous hand to its assistance.

It was the hope of his friends that he might be spared for many years of useful life; but when his health failed him last spring he sought rest and health in the bosoms of his beloved wife and daughter at the foot of the great Rockies, at Kalispell, Montana, where he answered his final call at 7 o'clock p. m., Nov. 12 in a beautiful spot among the foothills of

the mountains, a fitting place of rest after a life of strenuous labor for the advancement of medicine, the ennobling of his profession and the health and happiness of mankind.

Dr. O. E. Evans died at his home in Gowrie, Iowa, Tuesday, Nov. 21st. Seven months ago Dr. Evans was stricken with paralysis and since that time has been confined to his home. Dr. Evans was born in Clinton County, May 2, 1846 and had practiced in Gowrie since 1872.

Dr. John H. Hollister, for years a physician in Chicago, died yesterday at Redlands, Cal., here he had been visiting a sister for the last year. He was 86 years old. Dr. Hollister left Chicago for California in an endeavor to benefit his health. In Chicago he lived at the Metropole Hotel. The body will be sent to Chicago at once for burial. He is survived by one daughter, Mrs. Franklin H. Martin, Metropole Hotel, Chicago.

The older members of the profession will remember Dr. Hollister as a teacher in the old "Chicago Medical College" for many years. Dr. Hollister's lectures on pathology would hardly be regarded as up to date now but in the days of his greatest activity, his lectures were thought to be valuable because they brought pathology so close to the practice of medicine. A generation of students has passed since Dr. Hollister was a familiar figure in the lecture rooms of what is now the medical department of the North-Western University. It cannot be said that Dr. Hollister made any material contribution to the advancement of medicine but was one of the men that inspired students with high ideals of professional honesty and integrity.

Book Reviews.

The Practitioner's Visiting List for 1912, Lea & Febiger, Philadelphia, \$1.25. These handy, useful account books have enjoyed a wide sale and are very commendable. They contain a number of tables for ready reference—therapeutic reminders, poisons and antidotes, etc. They teach system and accounts so kept have a legal standing. The books are a handy pocket size.

Vol. 7 of the Practical Medicine Series of year books for 1911 contains a resume of the literature of the current year on Padiatrics by Dr. I. A. Abt and Orthopedic Surgery by Dr. John Ridlon. Supplementary notes are supplied by the authors. These little books—\$10.00 for the series of ten—are indispensible to one who would keep abreast of current progress. They are marketed by the Year Book Publishers, Chicago.

Collected Papers by the Staff of St. Mary's Hospital—Mayo Clinic.

W. B. Saunders Co., \$5.00.

This is the 1910 volume of papers published by the Mayo Clinic at Rochester, Minnesota. It is impossible to review a volume of this character. It may be regarded as belonging to a class of productions designated as "Contributions to Knowledge". The book is made up of original papers based on the actual work carried on at the Mayo Clinic. There are contributions from twenty-seven workers, covering quite a range of subjects. Practically all these papers have been published in current medical literature and are now grouped in a volume of 637 pages for preservation and convenient reference. This is the second volume of contributions from this famous clinic.

Nostrums and Quackery.

The American Medical Association has issued a volume for one dollar that contains more things than any other medical book on the market unless it be a medical dictionary. The title of this book of 509 pages is "Nostrums and Quackery." As well as we thought we knew the American people, we are utterly astonished at the number of medical frauds that have been perpetrated upon them and in most cases without any protest on the part of the victims. Through the influence of numerous persons having a desire for better things,—the Post-Office Department and a few public prosecutors—the lives of some of these framed promoters have at times been made unhappy. *Colliers Weekly* has been a busy watcher and the fraud detective department of the A. M. A. have given these people but little peace. The attention of the general public has been aroused and the public are not sure of anything of a medical kind unless it is the honesty of the family physician to whom they sometimes come for advice in relation to cures. It is unfortunately true that numerous fraudulent propriety nostrums have come into general use through physicians who were imposed upon by smart agents and unscrupulous medical journals which were willing for a money consideration to use their advertising pages to defraud physicians and the public.

This book is intended to furnish to the profession and the public information on these matters which may be regarded as correct.

The physician who has a copy of this book will be in a position to answer any questions a patient may ask in relation to any drug or cure and also be able to fortify his statement by a book reference to the same.

New Physicians.

The following physicians were admitted to practice in Iowa at the last meeting of the Board.

By reciprocity with other states:

Wm. G. Allen, Independence; Beecher B. Baldwin, Yetter, Percy B. Battey, Council Bluffs; Mathew J. Fitzpatrick, Mason City; Thomas V. Golden, Creston; E. Burton Hadley, Waterloo; Benjamin C. Hamilton, Jefferson; Wm. F. Hamilton, Baxter; Augustus F. Kober, Charles City; Thomas W. W. Little, Lamoni; Ralph S. Lovelady, Sidney; Arthur P. Maloney, Jolley; Walter A. Matthey, Davenport; John S. McAtee, Council Bluffs; Jay K. McKenne, Charles City; George R. Narrley, Keokuk; Rosannah Russell, Cherokee; Raymond A. Seiler, Blairstown; Frank E. Stoaks, Onawa; George W. Twomey, Des Moines; Benjamin J. Voigt, Dixon; Geo. W. Behrens, Nemaha; Joseph T. Berry, Burlington; Wellington A. Thomas, Lorimor.

By examination, the following were admitted to practice:

Roy G. Barrick, Sioux City; Clifton L. Belding, Des Moines; Frank L. De Wees, Keokuk.

Vern W. Embree, Gayville, South Dakota; Alexander Fettes, LeMars; Charles W. Henney, Dunlap; Francis G. Krum, Rock Island, Ill.; Guy E. McFarland, Des Moines; Robert C. Nichols, Lawton; James B. Owen, Mt. Ayr; John Wm. Shuman, Washington.

We want to call the attention of county secretaries to the importance of getting after the new doctors and getting them started right.

Society News.

Dr. J. P. Dougherty was elected secretary of the Woodbury County Society for 1912.

The 40th annual meeting of the South Eastern Iowa Medical Society met in Washington, Nov. 16, under the presidency of C. A. Boice. More than forty physicians from out of the city attended the sessions. The ladies had prepared special entertainment for the visiting ladies and some fifteen were present. The annual banquet was served at noon. Eighty three sat down at the tables. Dr. C. W. McLaughlin was toastmaster. Atty. M. W. Bailey spoke on "County Hospitals". Mr. Bailey is President of the Washington County Hospital Board. Dr. L. W. Littig spoke on "The County Society". Dr. D. C. Brockman on "Reflections", and Dr. C. E. Ruth on "Porto Rican Medicine".

The President's address was given by Dr. C. A. Boice on "The Potential Value of Hospitals."

The following program was rendered in full. Every paper was well discussed. Each paper was well prepared and well presented. Anesthetics—Dr. J. W. Pence; Glandular Fever—Dr. J. H. Chittum; The Three Essentials of Healthy Human Life—Dr. J. Fred Clarke; Drug Therapy—Dr. S. K. Davis; Tincture of Iodine as a First Dressing—Dr. H. A. Leipziger; Practical Physiology—Dr. J. F. Herrick; Typhoid Vaccination—Dr. J. S. Gaumer; Report of a case of Torsion of the Omentum—Dr. S. A. Spillman.

Fairfield was selected as the next meeting place—Nov. 19, 1912. Dr. S. A. Spillman was elected President, Drs. J. L. Overholt and S. K. Davis as Vice Presidents, Dr. F. F. LaForce was reelected Secretary-treasurer.

The Evening Journal presented each attendant with a copy of the paper containing a full writeup of the meeting.

Monroe County society will meet in the office of Dr. T. R. Jackson, Albia, Dec. 21, with this program: 1911 in Medicine and Surgery—T. R. Jackson; The Physiology of Alimentary Digestion—C. C. Fowler; An Essay on Pain—A. W. Peppers; Gastric and Urinary Examinations—R. P. Miller.

The Keokuk County Society met in Sigourney Nov. 8. After dinner together at the hotel the following program was heard: Kinks and Bands in the Ileo-Cecal Region—M. F. Moore, Martinsburg; Gastric and Doudenal Ulcer—L. W. Littig, Davenport; Evolutionary Medicine—E. W. Gardner, Webster; The First Stage of Pneumonia—F. F. Piercy, Delta; President's Address—Alva Negus, Keswick.

C. A. Boice of Washington, gave an interesting discussion of the Benefits of the County Hospital to the Profession.

L. W. Littig gave a talk on the Benefits of County and State Societies, and gave several thoroughly practical suggestions as to how each could be made more interesting and practical.

The following are the officers for 1912: President—A. P. Johnson; Vice President—W. W. Eastburn; Secretary—J. A. Dulin; Treas.—L. B. Oliver; Delegate—W. W. Eastburn, all of Sigourney. Alternate Delegate—C. B. Taylor, What Cheer; Censors—R. V. Henry, Hedrick; F. F. Piercy, Delta; Wm. Pfannebecker, Sigourney.

The Polk County Society met Nov. 1 at the Savery. Dr. A. R. Amos read a paper on "Choked Disc." Dr. Ralph H. Parker presented the subject of "Diseased Accessory Nasal Sinuses." This paper was illustrated by lantern slides and X-Ray plates.

The Polk County Society met in the Savery, Nov. 28. Papers as follows were presented:

Pathology of Carinoma of the Uterus—Dr. D. J. Glomset; Hemophilia and its treatment with human blood serum, with report of two cases—Dr. W. E. Baker; Occult blood and its significance in the diagnosis of gastric ulcer—Dr. J. T. Strawn.

Poweshiek County Society, Grinnell, Dec. 5th, Metropolitan Cafe. Banquet at 7:30. Yourself and Ladies are invited to attend. Please notify the Secretary on return card today if you can be present. Plates \$.50 each. Our Relations to the Irregular—Dr. E. B. Williams; History of Medical Ethics—Dr. I. N. Busby; Presentation of Interesting Case—Dr. E. F. Talbott; Review of the Year with a Few Suggestions—Dr. O. F. Parish. Election of Officers. After the banquet the ladies will be entertained by

The school board of Davenport has recently established a Department of Child Welfare. Dr. John V. Littig is the supervisor of this department, and Miss Clara Crane is school nurse. The work of the department includes medical inspection of the children, personal hygiene and sanitation of the school buildings with regard to light, ventilation, heat, etc., the supervisor will devote from nine to eleven in the morning of each school day, the nurse will devote the afternoon of each day to the work.

The Northern Iowa Society met at Wall Lake, Oct. 19, in 20th annual session, and listened to this program:—

Address	President L. H. Jones
A Surgical Talk	Wm. Jepson
Internal Medicine.....	E. W. Meis
"Radical Treatment of Fractures"	J. E. Conn
"Things Worth Knowing"	U. C. Jones
Paper	E. S. Heilman
Paper or Talk	F. C. Leytze
"An Unusual Skin Eruption	J. C. Stoakes
"Some Functional Diseases of Digestion"	F. J. Murphy
"X-Ray Diagnosis"	G. S. Browning
"An Interesting Case"	Ed Crane

The 10th annual meeting of the Davis county society will be held at the Commercial club rooms, Bloomfield, Iowa, Thursday, Dec. 7, 1911 at 10 a. m. Dinner will be served at the Hotel Sax. Ladies in attendance will be entertained in the afternoon.

President's Address—Dr. E. D. Beauchamp; Symposium on Obstetrics, Dr. W. L. Downing, Moulton; Dr. E. T. Printz, Moulton; Dr. E. R. Newland, Drakesville; Dr. C. Cronk, Bloomfield; Dr. H. C. Young, Bloomfield.

Election of officers will be held at this time and we desire a full attendance.

We note that the Departments of Agriculture and of the Post Office are still carrying on the good work of exposing frauds. Of late, many of the widely advertised and much vaunted 'cure-alls' have been found to consist largely of cane sugar. Sometimes a little salt, coloring matter and watter is added. Printer's ink seem able to endow common articles with super human powers.

It would be well if all the county elections were held in November, and all the dues collected during January, the member becoming delinquent in case dues are not paid by March first. We are not systematic enough in our society work. A little system will make less work and for more worth.

Delegates should be elected early and the names forwarded to Secretary Treynor. At every meeting, some local societies have failed to make a report. Business is retarded, frequently misunderstandings arise.

It would seem much easier to do all this work early in the year and make full and complete reports by April first, than to drag along thro'out the year.

If you change your present address, please notify the editor. Every effort will be made to get the Journal to you, but we can only on the addresses as furnished us. Every month we hear from one who has not gotten his Journal. Just send us word before you move and we will send to the correct address.

Again, we believe that the same men should be sent to the House of Delegates year after year, as long as their service permits. Thus only will your society be most able represented. It is only those who have had experience and acquaintance in society work who will be able to do the best for both the county and state societies. Think these things over.

Are there men in your county who have not paid dues for 1911? Men who previously have been in good standing? Why not get these all in this month and start out the new year with a perfect score?

We are informed that in a certain county, the men are only on fighting terms and that the county society has not met this year. We can't expect much progress with conditions so. If we don't have confidence in each other, we can not blame the people for following after false gods. Meet the other fellow half way, drop your jealousies, and both of you will be better men.

We believe that every society should have a press secretary. By this we mean that meetings should be reported in the local press. It is well to let the people know of our activities. When some paper has been read, which is of local interest, have it published. There are communities in the state which don't know that there is such a thing as a medical society. Let your community know that the physicians are organized, progressive, harmonious. Have your friends expect something of you and live beyond the expectations.

PAIN AND TENDERNESS IN THE REGION OF THE APPENDIX AS THE INITIAL SYMPTOMS OF PNEUMONIA.

CHARLES ENFIELD, M. D., Jefferson, Ia.

The above condition in a robust man of forty led his attending physician a man of much experience, to diagnose appendicitis. Seeing the case one hour later I made out the physical signs of lung inflammation. Calling at the doctors' office on the way home I mentioned what I had found. He believed I had made a mistake. Unfortunately there was termination of the illness by a large pulmonary abscess, with retraction of the right chest wall as one of the results, together with the usual morning expectoration of much pus. Thanks to an active outdoor life, this patient gets along fairly well and conducts a large farm.

WHAT TO STRIVE FOR.

EDWARDS EVANS, M. D., LaCrosse, Wis.

Above my desk is a brass plate. It carries a picture of a high board fence; on one side, a tramp peering over and grinning pleasantly at a bull-dog on the ground, at the other side. It carries this legend:—

T'is easy enough to be pleasant
When life goes by with a song
But the man worth while
Is the man who will smile
When everything goes dead wrong.

Some such sentiment as this must guide the efforts of every successful County Secretary. You must have the sang froid and the good fellowship of the Knight of the Road, coupled with tenacity of purpose—the stick-at-inveness-of the bull-dog.

The County Society is the unit and center of the State and National organization; but the County Secretary is the heart, the pulsing motor of the County Society.

I take off my hat to the efficient County Secretary. From observation and experience I know much of his trials and a little of his triumphs.

In greater or less degree every one of his refractory flock is vaccinated with one or more of the seven deadly sins:—pride, covetousness, luxury, anger, gluttony, envy, sloth. I need not enumerate how those sins distress the good secretary; but what a thorn in the side of good-fellowship and ethical conduct is the covetous doctor, who wants not only what he earns himself but also wants a share of what he is incompetent to earn; as is his partner in sin, the gluttinous doctor, who greedily absorbs the aforesaid covetous one's surgery at 40 per cent. How anger and envy corrode the strength and lessons the usefulness of the society, I need not tell you. But do you not agree that the slothful member gives us most trouble of all?

How to inoculate our professional brethern (in and out of the County Society), with the opposite virtues:—Humility, liberality, chastity (of professional conduct), meekness, temperance (in speaking of other doctor's mistakes), brotherly love, and diligence, is a task worthy of a Pasteur or an Ehrlich. I know each of you is ever looking for a remedy in the laboratory of your own good-natured enthusiasm, and I hope some one of you will find it.

If you are a good secretary, strive to do your work in spite of all apparent discouragement. If you are a poor or indifferent one, if your heart is not in your work, resign and help get the right man in your place. Every county has a right man. We need organization in our profession today, more even than organization of the profession.

While medical men are notoriously hard units to unite; yet they need, as no other body needs, the benefits of co-operation; for even in the large city we lead lives of isolation and great loneliness, sometimes we see little of our colleagues for long periods, and what is worse, sometimes, desire to see less of them than we do. The best of us may react normally against such isolation and be able to balance much drudgery and more discouragement with much affection and more gratitude in our rounds; but the average practitioner must associate in a fraternal way and in scientific discussions with his fellows, if he would maintain in their proper proportion and relation, the social, the scientific, and business sides of our calling.

In our County Societies we must preserve, in their proper relations the social, the scientific and the business sides of our calling. Personally,

I feel very little time should be given to the business side. I have observed that the doctor who devotes much thought to this is usually an indifferent doctor, and a not over successful business man; while the one who assiduously pursues scientific medicine unconsciously succeeds financially.

Because our special qualifications we are bound to promote and assist all movements for general welfare in our community; therefore I think the County Societies should often hold open meetings. But I feel most attention should be paid to the scientific side of medicine, to new theories rather than old practices. I am afraid of the so-called practical man, who, in the phrase of Disraeli, "practices the blunders of his ancestors."

Strive to keep up circulation in the "grey cortex" of the County Society, active enough to counteract the benumbing influence of routine.

THE COUNTY SECRETARY AS A PIECE MAKER.*

A. T. GREGORY, M. D., Elroy, Wis.

When invited to write a paper on this subject my first thought was how much could be said; but upon a closer study of the subject, I came to the conclusion how little can be said. In this brief discussion I will not attempt the task of formulating in words all the duties of the secretary as a piece maker. Some one naturally on the surface and do not need any analysis; while others are more deeply seated and require special mention.

The work of the secretary as a piece maker is varied and involved a multitude of intrinsic duties. There are innumerable and perplexing problems that have baffled the most experienced and wisest of counselors.

The secretary's personality should be of a peculiar character and he should be endowed with fitting qualities for the office. I prefer to join the qualities of sympathy and loyalty under the one quality—character. He cannot, if he would, avoid responsibility. He should be an accurate observer, his senses must be trained, quick to recognize and discriminate, a reader of human nature and endowed with a most convincing and persuasive magnetism. When called upon to settle disputed questions or injured feelings within the membership or among the profession in general, he must be tact and judgment convince them of their imaginary wrongs and grievances and keep peace and good will among the members.

Should some member so far digress from the code of ethics as to injure the character of others, it is the duty of the secretary as a peace maker, to see that the offending brother atones for his offences. Be alert and active, do not pour oil on an already kindled fire, but by counsel and advice convince the offended brother that he see his grievances in the wrong light, and thus banish strife and discord from within the society walls, and avoid producing sore tender spots upon the members.

Emphasize the fact, that to keep peace and good will among the members of the society and profession in general, every up to date physician of good moral character (and all should be who keeps abreast with the times, should affiliate himself with both county and state societies. Impress upon him, when these are gained, that he should seek others of national character, which will be a source of inspiration and will be the means of gaining closer friendships.

Endeavor to keep him interested in society work, for as soon as interest is lost he becomes dissatisfied and discouraged, discouraged, discord and strife creep in among the members, and sooner or later one by one they drop out.

Convince them that on their work, co-operation and attendance, the life, good will and prosperity of the society depends and by so doing you will keep peace and good fellowship among the members.

The social feature of the society meetings is an important one, and should include the ladies, as they contribute largely to the social function of most affairs.

In order to retain the interest of a body of men we must provide for their social welfare, which serves to relieve their minds from their daily tasks. The needs of social features in the meetings, become more apparent year by year and without them we cannot expect to gain unity, good fellowship and co-operation.

I believe the county secretary is the most important factor in the development of peace and good will among the members.

Keeping the machinery of the society well oiled and running smoothly is a small task, and this is doubtless the experience of many, but perseverance and that will tride us over the greatest of difficulties and bring peace in the end.

Waterloo, Ia., Dec. 2, 1911.

Dr. D. S. Fairchild, Clinton, Iowa.

Dear Doctor: As an appendix to my recent letter to you regarding the typhoid situation at Cedar Falls and the State Teachers' College, I am pleased to report marked improvement. No new cases have been reported since November 24th. The city water is being treated, and strict sanitary precautions are being urged officially through the public press. Too much cannot be said in commendation of the splendid manner in which Cedar Falls physicians and health officers have united in an intelligent effort to suppress the epidemic. One hundred thirty cases have been reported, and, as I have said, none since the 24th of November. To date there have been eight fatalities. At the Normal College conditions are especially improved; probably due to the fact that the college authorities and students alike gave immediate co-operation to the local Board of Health. Another evidence that preventive medicine succeeds or fails in proportion to public intelligence.

Yours very truly,

T. U. McMANUS.

Doctor Osler says "the well conducted medical society represents a clearing house in which every physician of the district receives his intellectual rating and in which he finds out his professional assets and liabilities."

Dr. M. H. Fussell—I thoroughly believe that at least three-fourths of the cases of appendicitis would recover if not operated upon, but I know there are no symptoms that will tell when a case is approaching the danger line until it is extremely dangerous either to interfere or to wait.

How startlingly true is it that "in more than one-half of the United States a human being can be born and can die without any record being made or official notice taken of the fact." The active co-operation of the members of the medical profession could easily remedy this shocking state of affair.

D. S. FAIRCHILD, M. D......Clinton
EDITOR

C. A. BOICE, M. D......Washington
ASSOCIATE EDITOR

Address of Chairman

Freeman Hornibrook, M. D., Cherokee, Iowa.

We cannot work long without tools and the practice of medicine is a hell without faith. The general practitioner found that diag-

*Read before the Iowa State Medical Society, Des Moines, May 18, 1911.

nosis and prognosis were very essential to him as a physician, but he must have something to cure his patients. He would often be led astray by the nostrum maker who readily supplied him with excellent testimonials from his brother practitioners regarding the wonderful efficiency of strictly ethical and scientifically prepared preparations. If his patient should survive he was willing to give the credit of the cure to a worthless drug.

Another factor that has had a discrediting effect upon the use and application of ordinary therapeutic measures is the marvelous advance in surgery not only in the art, but in the number of artists. The physician as well as the layman appreciate quick results and whether good or bad our chance of obtaining them are good in surgery.

There is a certain school of practitioners called appendictopathy that has its representative in almost every village and town in the United States, their work is easy, the fee is good. From four years in a cheap medical school directly into the abdomen is a common procedure at the present time. It takes no particular training in pathology or perfection in manual dexterity to open a belly after premature diagnosis, brush the real cause of the trouble to one side and remove an innocent appendix. He who does this kind of work generally has a much better rating in the community than the slow going, slow thinking internal medicine man.

Our patients have gone surgically mad. No little doctor with a tin case full of vials and a head full of brains can successfully cope with the appendictopathist.

As we have many religions and creeds, so we have many cultisms and pathies. There are thousands of curealls outside the realm of drugs and many of our best citizens consider us an association of scientific poisoners.

It is peculiar that no matter how sensible or successful a man may be the Almighty give him the right to be a fool about the care of his body. An old greasy Indian or a dirty black mammy competes on equal footing with the much educated general practitioner and many times takes the credit of the cure.

Every new cult created must of necessity depend for its success upon the noise it makes. The poor scientific medicine man works noiselessly. He does not take the world into his confidence, he is too busy and too ethical to advertise his wares, his cures are not chronicled on the patent side of every country newspaper and the good people are not even familiar with his photograph.

Hood is famous the world over for his sarsaparilla and the name of Lydia E. Pinkham is immortal but I doubt if one in a thousand has ever heard of Koch, Lister or Pasteur, except through their respective namesakes.—Koch's Hair Tonic, Listerine and Pasteurine. It makes little difference to the profession whether or not the world

gives them the credit they deserve. The reward they get is in accomplishment and not in the plaudits of the masses.

In every civilized nation of the world the best brains are at work, attempting to fathom the cause of disease and to bring about methods for its irradiation and prevention. For the first time in history philanthropists are ready and willing to give their millions to promote scientific research and endow laboratories. What brains and money can not fathom it is not for humanity to know.

It is not the wish of the author to present a list of new drugs brought to the attention of the general practitioner during the last year many of which are not proven and those of much worth could better be taken up separately in a more exhaustive treatise.

It is my intention to take up the subject of bacterial vaccines of more or less common use at the present time.

The great field of vaccine therapy is in its incipient stage wonderful cures have been reported and many of the much heralded preparations have been found to be inert. Practically only those diseases that have resisted ordinary medication, have been treated by these methods, enough has been accomplished to give us great hope in the future.

Mulford in his description of vaccines and antitoxines has this to say regarding the composition and differences of the two substances, *Bacterines* (bacterial vaccines as they are termed by Wright and his followers) are killed pathogenic bacteria suspended in sterile physiological saline solution protected by antiseptics from contamination and standardized to contain a definite number of bacteria in each cubic centimeter.

They are used to develop in the body of the patient a condition of active immunity to the corresponding pathogenic germs or other toxins. *Bacterines* are not antitoxines but toxic substances, their therapeutic value is due to their stimulating power in the formation of anti bodies in the body of the individual or animal into which they are introduced, because they are toxic. Physicians often fear to use bacterines, yet the results from many thousands of injections have shown that practically the danger is so slight as to be negligible. No serious or dangerous consequences have been reported.

Physicians often confuse bacterines with serums but there is a wide distinction and oppositeness of action between these substances. *Bacterines* are toxic substances which when injected into the tissues stimulate the normal cells of the body to produce antibodies, thus leading to a state of active immunity. Serums on the other hand are fluids containing anti bodies already formed and when injected into the circulation supply the blood with anti bacterial elements causing little, if any, stimulation of the body cells, and so establishing passive immunity. The beneficial effect of anti toxin serums is immediate and they are of use even if the immunizing

powers of the body are slowly exhausted and incapable of responding to further stimulation.

It is therefore readily seen that each has its place. The bacterial vaccine was at first considered of use only in chronic conditions, but more recent research and experimentation shows them to be of much value in the more acute infectious diseases, and while a little slower in action than the anti toxines, it certainly seems more reasonable and rational to expect better results from an antitoxin developed in the body cells of the infected individual through the agency of the bacterial vaccine than from the antitoxin developed in the blood of one of the lower animals. When absorption is poor and reaction is slight and medication must of necessity work rapidly to save the life of the individual, the perfected antitoxines would of course be selected. The wonderful efficacy of the diphtheria antitoxin is an excellent demonstration of its life saving properties.

There is still a question as to the relative merits of the auto-genous vaccine and the stock vaccine. By the former we mean that it is made from cultures taken from the infected individual and re-introduced into the system by the latter that it is made in the ordinary manner in the laboratories, the bacteria taken from some infected lower animal or other individual.

There are those who believe the autogenous method is far better and it certainly looks the more rational of the two. The excellent results however given us in many cases from the stock vaccines prompts us to give them first place because of their readiness and ease of application. Before the administration of vaccine it is of greatest importance to know definitely the nature of the offending bacteria. In many cases we blame the vaccine when as a matter of fact we have not isolated the causative germ. Very often we have a mixed infection, mixed vaccine corresponding to the particular bacteria found to be the causative factors in the disease should be used.

Some difference of opinion is noted, as to the site of election for the injection of the virus but inasmuch as it is given satisfactorily with equally good results either subcutaneously or intramuscularly by different operators I think this question can well be left to the special requirements of the case in hand.

The Council of Pharmacy of the American Medical Association gives us eleven antitoxines in more or less common use, and fourteen bacterial vaccines. Many more than this have been tried by the profession and discarded as useless, and many that seem to have great value have not yet been reported on by the Council.

Of the great group of bacterial vaccines the one that stands out above all others in apparent usefulness is the typho-bacteria. Its inoculation as a prophylactic measure against typhoid fever by Wright and Leishman in the British Army and its use in our own

army as reported by Major Frederic F. Russell, has proved beyond a doubt its great efficacy. The immunizing dose recommended by the Surgeon General is five hundred million killed bacteria followed ten days later by one thousand million and ten days later this by one thousand million. The lasting effect of this acquired immunity has been worked out by Harrison, who found that agglutenons could be obtained from serum of men who had been innoculated as long as six years previously.

The administration of the bacterine for the cure of cases is recommended by Lieut. Fletcher of the U. S. A. and he reports several cases in which he demonstrates its usefulness.

He has this to say in conclusion. The therapeutic administration of anti-typhoid vaccine is attended with no bad results and in no way increase the patients discomfort. On the other hand its use in all of the cases observed did improve the general condition of the patient, while in three cases above referred to its action was nothing short of marvelous. In view of these facts it would seem that vaccine in typhoid fever is certainly indicated.

So much has been written regarding tuberculin and so varied are the opinion as to its efficacy that we will leave the subject with the statement that little advance has been made in its perfection and application during the past year.

Streptococcus and *staphylococcus* vaccines have been used more extensively in the treatment of acute infections where the causative germ was isolated, and some excellent results have been reported.

The treatment of acne by a specific bacterin is reported favorably by Fleming in the *London Lancet*. He states that he has found the acne bacterin effective in the mild forms of acne. Where pustulation is present—he advises the combined administration of the *staphylococci* and acne bacterins.

An exhaustive article on the treatment of suppurative otitis media by vaccine is presented by Paul Weston and John Kolner in the *Journal of the American Medical Association*. A mixed antogenous vaccine is used by them. Their results are very satisfactory under vaccine treatment. "Three times as many patients are cured within thirty days and permitted to go home as under the usual treatment. In general cases of otitis media offer a fruitful and encouraging field for the employment of vaccine therapy.

The use of streptococcic vaccine in scarlet fever as a preventative and cure has been tried and reported favorably and unfavorably upon by different authors. Not enough has yet been accomplished to warrant its general use. It has been used successfully as an immunizing agent as reported by Spaulding.

Pneumococcic vaccine has been used with some good results in acute cases of lobar pneumonia. The duration of the disease seems

to be shortened and the delirium and fever decreased. An antogenous bacterin is recommended by most authors.

On account of the exceedingly poor results obtained in the ordinary local treatment of acute and chronic gonorrhea and accompanying sequela the numerous gonococci vaccines have been used quite generally by the profession. My own experience has been quite discouraging but some have found them very valuable as an adjunct to a more or less strenuous local treatment.

Those who have maintained that carcinoma is of bacterial origin have been experimenting with numerous vaccines in the hope of perfecting a cure or inhibiting the growth. Doyen, a French Surgeon, has isolated from new growth a micrococcus which he believes to be the specified cause of cancer and called it neoformans.

Wright perfected a neoformans vaccine and has had some remarkable results. Many failures have been reported, but some cures are on record, it is especially indicated as a post-operative precaution.

The use of streptococcus vaccine in erysipelas is found to be advantageous in many cases and should be tried in all infections of this kind. The results are sometimes remarkable, but not necessarily reliable.

Personal experience has not demonstrated its worth.

Antirabic vaccine obtained from the emulsion of the cords of rabbits that have died as a result of the subdural injection of a fixed rabies virus has passed the stage of experimentation and has a fixed therapeutic value in hydrophobia.

Enough has been presented to show a wonderful future for rational medicine.

IS THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION PROVING ITS WORTH TO THE MEDICAL PROFESSION?*

CHARLES S. CHASE, M. D., Iowa City, Iowa.

What this Council is, by whom created, and what it has accomplished, during the six years of its existence is almost a marvel in the recent advances in medicine. What it is can best and most briefly stated by a quotation from one of its own reports: "The Council on Pharmacy and Chemistry was organized nearly six years ago. Its chief efforts were directed toward exposing the false statements that were being circulated regarding the composition of proprietary medicines. While work of this kind is still (Nov. 1, 1910) needed, and while it would be a mistake to diminish in vigilance, this is no longer the main problem of the Council. The older frauds

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Section on Materia Medica and Therapeutics.

have been so thoroughly discredited and the more recent ones are so systematically exposed it has been possible for the Council to consider the correction of other abuses. The next problem, therefore, which engaged its attention was the checking of exaggerated and extravagant therapeutic claims made for proprietary medicines. This has been, and still is, a most difficult problem, owing to the lack of knowledge on the part of many physicians who seemed unfamiliar with the real therapeutic value and limitations of drugs."

Again the Council declares itself to the profession as follows: "As problems of the character indicated are being solved, at least in a measure, the Council is broadening its scope and is taking up the question of a more rational and intelligent employment of remedial agents. With this end in view it is making every effort to correct thoughtless prescribing. It hopes to do away with not only the 'shot-gun' and 'kangaroo' prescriptions of most proprietary formulas, but also to call attention to many impossible combinations found in extemporaneous prescriptions. It further advocates that physicians should, so far as possible, limit their prescriptions to drugs of known and tried value. To this end the Council has sought the withdrawal from the National Formulary of many obsolete formulas, and will use its influence to eliminate also many useless drugs from the forth-coming revision of the Pharmacopeia."

The Council has also endeavored to remedy what it has felt to be a crying need, namely, reporting such new preparations as may be found of real value, though included in neither of the preceding treatises. To this end it has issued *Annals* for the past three years containing New and Non-Official Remedies.

The Council has certainly been vilified and roundly denounced by its enemies, the nostrum venders, as well as many proprietary manufacturers. It certainly has not always been as stoutly defended by those who should be its friends—the physicians of the land. That the laity would defend it, no one will question, did they but know what its work has already done for them.

Dr. H. W. Wiley, the honored president of the American Association for the Revision of the Pharmacopeia, who was elected at its last session, May, 1910, could attest what the antagonism of the foes of pure medicine meant to him in the bitter fight waged against him by these same interests. That this pioneer, who almost alone sought for nearly twenty years to purify drugs, should be assaulted is little wonder. That he and those who stood with him to the end, June 30, 1906, should stand vindicated by the people when they came to know at last what these their friends stood for was a signal triumph.

A second notable factor in the great battle waged against nostrums and their venders has been, for a decade at least, the *Journal of the American Medical Association*, "the cleanest medical weekly

in the world," one physician has declared. Its advertising columns were stripped of all matter that had even the appearance of evil in it. The fighting editor of the Journal brought down upon his devoted head the wrath of the vengeful gods of quackery of every type and form. He has lived through it all and stands today upon the loftiest peak of the mountain of calumny which has sought to overwhelm him.

To enumerate the vast amount of work done by the Council during the past five years would exceed entirely the time-limit imposed for all our papers. I have but to refer you to the files of your Journals for the years included. In them you will find material that will first surprise, then interest, then instruct you all if you are unfamiliar with it. A few nostrums may be named in the chronological order of their disclosure. In June, 1905, the ingredients, long suspected but never before disclosed to the general public, of such nostrums as Ammonol, Antikamnia, Orangeine, Phenalgin, and many others, were made known. Acetanilid was the potent poison, subtle and dangerous, that lurked well hidden in them all. Somnos was made the subject of a searching and singeing inquiry in Sept. 1906, with the result that only "few uninformed doctors and their unfortunate patients are longer using it." "It is hoped," declares the skillful wizard who presides over the laboratory of the Association, "that physicians who have been blindly using Somnos without knowing even the strength of the preparation, much less what it is, will compare its effects with those of a five percent. Elixir of Hydrated Chloral."

A little later, during the same year, (1906) Uron and Thialion were shown to be medicinal impostors. Vin Mariani was revealed about the same time as a most fraudulent compound. It had been for years a well-known and popular propagator of the cocaine habit. Early the following year (1907) a campaign opened against nostrums with great vigor. Many liquid combinations alleged to contain pepsin and pancreatin, and variously called 'Digestive Ferments' came under the scrutiny of the Council. Despite great pressure by strong and well-known manufacturers these were publicly condemned. Lactopeptine, and who has not heard of and used it?, was soon carried to the "medicinal junk-pile" by order of our despised Council. Trophonine, Protonuclein, Nephritin, Peptenzyme, etc., etc., etc., followed this greatly exploited nostrum in quick succession.

This critical inquisition of worthless nostrums was interspersed from time to time with findings on the part of the Council of drugs of real worth. It has not hesitated to endorse the same and to give them every proper publicity. It has passed upon more than twelve hundred of such, since its organization, with approval. Such preparations as the Arsanilates, based upon Erhlich's theory of 'select-

ive affinity', indorsed and supported by Robert Koch, soon became prominent both in name and use in the profession. Hence followed each other, rather rapidly, Sodium-arsanilate or Atoxyl, Sodium-acetyl-arsanilate or Arsacetin, and later, and, more prominent than either, Sodium-arsenphenolamin or '606' or Salvarsan, its proprietary name. The heralded 'wonderful cures' wrought and to be wrought by this last arsenical preparation would have made possible some of the greatest frauds and fakes ever exploited had it not been for the steadying and staying hand of the Council. Not disposed to condemn without its 'day in court' this apparently remarkable therapeutic agent it is urged, simply, that it be 'tried out' on its merits, and not 'rushed' by the profession as was Atoxyl with many reported and no doubt more unreported cases of resulting optic nerve degeneration. The Council declares it is too early, speaking of this preparation, to judge its worth. Adverse reports, it declares, are already appearing in the literature. "Its unfortunate sensational introduction will be followed by its use in a variety of conditions in which it may or may not be useful, and may be harmful."

The Council has 'made good' in its exploitations of its compendium of approved pharmaceuticals, especially the rapidly increasing synthetics. Its book, which it has named 'New and Non-Official Remedies', is a fit precursor or supplement to the Pharmacopoeia, revised, as it is, once each decennium. It is really of more real value to the prescribing physician than the National Formulary.

The Council has also, with great pains and patience, taken upon itself instructional work with teachers of materia medica in colleges of medicine. That an idea may be gained of its methods along this line and as an illustration of the practical side of this phase of their work an excerpt from a report to the Council is submitted. "In a general way", says one teacher, "I take up a description of the conditions which existed before the Council's work began, dwelling particularly on the state of helplessness of the profession at that time in regard to all proprietary drugs. In addition to this I point out the various ways in which the nostrum makers misrepresented their goods, and the dangers which arose from their so doing. Thus my students were made to thoroughly comprehend how most nostrums were exploited, and the profession deceived. This I illustrate with specific instances from the 'Propoganda' choosing by preference those nostrums whose names are familiar to the profession and laity as well. I then point out how the profession has in its own hands the remedy for these conditions. This leads naturally to the 'New and Non-Official Remedies' which may be cited as worthy of reference and following, so far as present experimental and clinical knowledge has determined. I urge my students to understand that the Council has its limitations and realizes that conservatism must always be had in mind. With such caution and suggestion, however,

I do not hesitate to advise them to follow willingly the leadership of some of the most competent pharmacologists and chemists to be found in America, composing, as they do, the membership of this Council." Lastly he declares with some emphasis: "I particularly tell them to pay little attention to the National Formulary in its present form."

I submit the foregoing to the members of this Association as good gospel as related to what things should be taught to the coming generations of physicians. It is a very fit anti-climax, when applied to the violation by nostrum venders of at least three of the commandments of the Decalogue, namely: "Thou shalt not steal", "Thou shalt not kill", and "Thou shalt not commit adultery".

I would that time permitted even the briefest notice of the findings of the Council as relating to the inorganic salts of Iron as compared with the so much and so long vaunted organic salts of same. The conclusion that the 'Tincture of Chloride', 'Reduced Iron', and Blaud's Pill', are not to be 'reduced from the ranks' must be comforting to, at least, the older members of this Association. The valuable suggestions made with reference to the almost endless discussion pertaining to Digitalis and its series, with everybody still 'hanging in the air' as to these preparations, are helpful in very great measure. And, finally, some suggestions with reference to internal secretions, their use and, more commonly, their abuse almost make the speaker forget he should have closed this paper long ago and incline him to start afresh. Like the wise men of old, however, let me suggest to you, who care to know about these and all other omitted facts: "Are they not written in the book of our chronicles, even in the Journal of the Association, with which our own State Association is federated?"

The Council, I dare to affirm, in conclusion, has 'made good', has 'Proven its Worth'. It has stood upon the picket line of duty through sunshine and storm and done our trick as well as its own. Having done all this without compensation other than such as it has had a right to expect, the commendation of the profession at large, I submit ought we not to cheer it on as it storms new citadels, attacks new enemies, breaks down new and multiplying forces which still seek to reach and deceive an unwary and easily exploited populace?

Discussion.

C. F. Wahrer, Fort Madison: Dr. Chase asked me to lead in the discussion of this paper, and I do it with a great deal of pleasure, because I have watched the proprietary medicine evils and the cheap, one-horse dupes that foster their trade. Some few years ago I would occasionally read a paper before a county or district medical society, and then in the evening we would invite the public and I would read a paper on food adulterations and patent and proprietary medicines, and their victims. The least credulous man in the world should be the good doctor, who is the most credulous. All that is necessary is for a wily, smoothed-tongued purveyor to come

to his office and set down a bottle of Scott & Bowne's Emulsion or a bottle of Syrup of Figs, saying that it is the very latest thing out, to get an order, or have the drug store get one, and the doctor will prescribe this slop or swill—whatever name you wish to call it—of unknown composition for the poor patient, who puts himself in the hands of the wise man from the east. They all come from the east and go to the west and grow up with the country. You can hardly go into a doctor's office but you find an Antikamnia almanac there, and the suspicion arises that the doctor is prescribing antikamnia for his patients. You allow the Ruf Chemical Co. to prescribe for you to-day, when they won't even tell you how much soda there is in the tablets. I used to do the same thing, but I have reformed. We have gone to medical colleges four years, we have helped to make laws in order to define exactly what a doctor must know before he is admitted to practice, and we are thinking of increasing the curriculum to a fifth year, and another year or two in the hospital; and yet we let some infernal blatherskite come to our offices and talk us out of what we have learned and tell us what we should give our patients for consumption or bronchitis or what not. It is a pitiable comment that such a condition exists. Our Journal of the A. M. A. has been active in creating the committees of Pharmacy and Chemistry, and it is the duty of this committee to scan all the different remedies that come up before the profession, claiming to cure this and that. This committee has carefully analyzed, to the best of its ability, these drugs like antikamnia, and that delightful preparation, Syrup of Figs, which is still advertised in the Medical Journal which you subscribe for, with that great big dragon called "La Grippe". You have seen it, and you have never written a protest to the editor of your Medical Journal for publishing such rot as that to occupy your time! This committee has done some wonderful work in absolutely knocking out of the market or from the advertising pages of respectable medical journals these claims, because they can't make good; they won't hold water. They do hold an immense amount of alcohol for the benefit of those people who are afraid to buy whiskey straight by its right name.

I am asked by Dr. Chase to talk upon "Things as They Used to Be." I have gone to the popular drug stores of New York City, Philadelphia, Keokuk, Montrose, Des Moines, New Orleans, Columbus, Portland and Seattle, and looked at the prescription files, and I can assure you that 66 per cent of all the prescriptions that the various doctors have written—those wise men from the east—contain one or more ingredients, the contents of which they didn't know any more about than the little baby before its navel-string is tied. This is not declamatory nonsense or an attempt at pushing Demosthenes off the boards, or anything of that kind; it is the simple, lamentable, unvarnished truth. And who are the men that wrote those prescriptions? They were not the common country cross-roads doctors. They don't write prescriptions. They carry their medicine in their satchels and dope it out, or carry whole bottles of Ayer's Cherry Pectoral or Antikamnia or Syrup of Figs of Fletcher's Castoria and leave it by the wholesale. But the prescriptions were written by men who are teaching materia medica in big medical colleges which condemn the colleges of the west because they don't know anything. They were written by men who graduated in Berlin and in Leipsic, et hos genus omne ad disgustibum. The smooth-tongued man came in with something in a bottle that didn't require any brains; the bottle told you what it was good for, how often to use it, and the patient would be cured.

But, thanks to the committee on Pharmacy and Chemistry, the medical men and women are waking up to the fact that that is not scientific medicine. What is the use of worrying your heads clear through your hair sitting up the whole night and making a diagnosis, using the microscope and making blood counts, and then spoil it all by giving your patient a tablet or a bottle, the contents of which you don't know anything about? I wish I could say something nasty that would offend—that would burn a whole through your gizzards and stay with you the rest of your lives to remind you of the faults that medical men have committed in those things. There is not time this evening—there wouldn't be time if you would give me all night—to tell you the tenth part that this committee has done, and I hope every one of you hat hasn't already done it will subscribe for the Journal of the American Medical Association and make it your Bible and guide for your own benefit and that of your patients. The Annals of Surgery, which costs \$5.00, published in New York; "Surgery, Gynecology and

Obstetrics" of Chicago; the New York Medical Journal; Pediatrics; the Journal of Surgery; the Medical Record, and a great many more, are to-day carrying the ads of these very things that I have mentioned to you. Won't you write a letter of protest to every one of them? I have, and if you will do the same thing, they will stop it. It is a shame and a disgrace that our medical journals have one kind of ethics for the medical pages and another kind altogether for their advertising pages.

J. H. Chittum, Wapello: For just a moment I was inclined to resent Dr. Wahrer's strictures on the members of the Iowa State Medical Society, but when he went on to say that he was speaking of things as they used to be; I was ready to smile at him and accept the whole proposition. The Doctor may be right, but either he under-estimates the intelligence of the profession of Iowa, or I over-estimate it; for I believe that, thanks to the Council of Pharmacy and Dr. Wahrer, things have been improved.

Dr. Chase: I am very much obliged to Dr. Wahrer for his suggestions of the way things used to be. I agree with my friend Dr. Chittum that things are much better than they were; I am absolutely altruistic about that.

SURGERY OF THE THYROID*

VAN BUREN KNOTT, M. D., Sioux City, Iowa.

I have been requested by our Chairman, Dr. Rockafellow, to present an article upon "The Surgery of The Thyroid". The short time allotted each paper prevents anything like full consideration of so comprehensive a subject, and no further attempt will be made than to furnish a resume of the subject with the hope that material may thereby be furnished for its further discussion and elucidation.

The history of thyroid surgery has practically been written during the past thirty-five years. Prior to that time, operative attack upon the gland was considered as most dangerous and unwise. The functions of the thyroid were not understood, and surgeons generally advised against surgical intervention in practically all cases.

To Theodore Kocher belongs the credit for placing surgery of the thyroid upon its present firm foundation, and his experience in the surgery of this gland, is today greater than that of any other man. Kocher's first work upon the thyroid was confined to the surgery of simple goitre, and living as he does in Switzerland where goitre is epidemic, his opportunities, for observation and facilities for extension of his experience, were unusual.

Shortly after Kocher had demonstrated that the thyroid gland might be successfully attacked, Moebius published his work, explaining the physiology of the gland and much of its pathology.

The impetus given thyroid surgery by the work of these two men was enormous, and, as confidence and experience increased, many operators and physiologists in various parts of the world contributed findings of more or less value until today we may consider the subject as occupying a well defined and well earned position among surgical procedures.

*Read before the Iowa State Medical Society, Des Moines, May, 1911.
Section on Surgery.

The surgical diseases of the thyroid which will be considered, are certain abnormalities of development, hemorrhage into the substance of the gland, acute inflammation, sarcoma, carcinoma, tuberculosis, syphilis, benign tumors, actinomycosis, echinococcus disease and simple goitre.

Abnormalities of Development: Part or all of the gland may be congenitally absent. Absence of the entire gland is accompanied by cretinism, and it is possible that this condition could be relieved by thyroid or parathyroid implantation.

Accessory thyroid nodules may be found in any portion of the neck from the sternum to the tongue, and their removal is at times made necessary by tumor involvement. Persistence of the thyroglossal duct with involvement of the thyroid isthmus or one of its lobes may call for surgical intervention, as in two cases seen by the writer, in one of which it was necessary to remove the right lobe of the thyroid, which was occupied by a large cyst, communicating with the lower end of the sinus.

Hemorrhage: Hemorrhage seldom, if ever, occurs in the normal thyroid unless caused by severe trauma. It may occur, however, in goitre. Should the intraglandular tension be too much increased, or should pressure upon the trachea become intolerable because of the rapid increase in the size of the gland, evacuation of the clot might be demanded.

Acute Inflammation of the Thyroid: Acute inflammation may attack the normal thyroid or attack the seat of goitre. In the first place it is known as thyroiditis, in the second as strumitis.

Thyroiditis or inflammation of the normal gland is much more rare than strumitis, as the degenerative changes accompanying the goitre, limit the naturally great resistance of the gland.

Both varieties are due to infection and usually complicate some of the infectious diseases, such as influenza, typhoid, etc.

The writer saw one case of acute thyroiditis through the courtesy of Dr. Jas. F. Taylor of Salix, Iowa, which followed a severe attack of influenza and which was accompanied by abscess formation. The pus ruptured through the posterior surface of the thyroid and came in contact with the trachea, making its evacuation at operation very difficult.

The treatment of either acute thyroiditis or acute strumitis, which has gone on to pus formation, consists in free incision and drainage.

Sarcoma: Any of the varieties of sarcoma may be found in the thyroid, and the disease usually appears in a goitrous gland. As it occurs with comparative frequency and as the only hope for the unfortunate patient is offered by an early and radical operation, prompt recognition of the nature of the tumor and equally prompt removal of the gland, is imperative.

The writer has seen one case of sarcoma of the thyroid through the courtesy of Dr. Bowers of Mitchell, S. D. In this case, although the operation was made soon after the appearance of the growth, the tumor proved to be a small round cell sarcoma, and the patient died within four months from the recurrence in situ.

Operation should not be undertaken in malignancy of the thyroid if the growth has perforated the capsule, if the growth is adherent to the great vessels in the neck or if evidence of marked cachexia be present. While surgery presents the only hope for these unfortunate patients, it must be admitted that recurrence of the growth has been the rule.

Carcinoma: Carcinoma of the thyroid occurs with much frequency and may be recognized by the signs which characterize the disease elsewhere. The preceding remarks concerning the treatment of sarcoma, apply with equal force to carcinoma. Early diagnosis, followed immediately by radical operation, being the only recourse.

Tuberculosis: Tuberculosis of the thyroid usually occurs during general miliary tuberculosis, but a few instances of tubercular degeneration of the normal gland have been reported in which no general tubercular infection was present.

Tuberculosis occurring in goitre is very rare. In 3,200 cases in which Kocher removed the gland, only one was found to be tubercular.

The treatment consists in the removal of the gland, exercising care to preserve the parathyroids.

Syphilis: Syphilitic involvement of the thyroid is more or less common, and has surgical interest merely because at times the necessity of making a differential diagnosis between syphilis and other diseases of the thyroid arises. In all syphilitic cases the administration of potassium iodid will determine the diagnosis as syphilitic involvement of this gland yields very rapidly to proper medication.

Benign Tumors of the Thyroid: The occurrence of benign tumors is extremely rare. Cases have, however, been reported in which, at operation, the enlargement of the gland was found to be caused by a fibroma or lipoma. The treatment of such cases consists in the surgical removal of the growth.

Actinomycosis: Actinomycosis of the thyroid has been but rarely, and usually occurs by extension along the cervical fascia. Cases have been reported in which the destruction of gland substance by this disease has been so extensive as to be followed by myxedema. The treatment consists in the removal of the diseased portion or portions of the gland, with the usual precautions to be observed in the treatment of actinomycosis elsewhere.

Echinococcus Disease: Echinococcus disease of the thyroid

gland is also rarely seen. Diagnosis before operation has, it is said, never been made.

Simple Goitre: By far the largest number of cases of enlargement of the thyroid, are due to some form of simple goitre. Kocher classifies simple goitre as diffuse, in which the entire gland is involved and nodular in which only a portion of the gland is involved.

Diffuse goitres are further subdivided by the same authority into,

- 1st. Hypertrophic follicular goitre.
- 2nd. Parenchymatous goitre.
- 3rd. Diffuse colloid goitre.
- 4th. Diffuse vascular goitre.
- 5th. Diffuse fibrous goitre.

Nodular goitre while limited to one or more portions of the gland, presents the same degenerative changes found in diffuse goitre.

In the time at our disposal, it is not possible to take up the consideration of the pathology of goitre, and we shall proceed to the consideration of its treatment.

It is now usually conceded that goitre is caused by some unknown bacterial infection found in the drinking water habitually used by the patient.

This theory is supported by the fact that those persons drinking from so-called goitre wells are practically all affected with goitre. The first thing then, which suggests itself in the medical treatment of goitre, would be a change of water supply. Ochsner states that more than one-half of all cases of simple goitre will recover under proper hygienic, dietetic and medicinal treatment.

It is not within the province of this paper to consider this form of treatment, but it is proper to mention it, as surgical treatment of simple goitre should not be instituted until medicinal treatment has been given a chance.

Upon the other hand, medical treatment may be much too prolonged in certain cases and great harm done thereby. Kocher says that careless treatment with iodine is now much more dangerous than excision of the goitre.

It is now a well established fact that the excess of thyroid tissue may be removed if the parathyroids, two or more, are not removed or injured, and if a portion of the gland equalling in size the normal thyroid is left in situ.

Removal of the entire gland is always followed by myxoedema and this disease frequently appears when large portions of the gland have been destroyed by some degenerative process.

Removal of all the parathyroid bodies but one is usually followed by tetany.

Forsyth says that the usually accepted opinion that the para-

thyroids are four in number, and that two may be removed at times with impunity is erroneous, as those bodies may number from one to eight, and that it is impossible to be certain as to how many have been removed and how many left behind.

The fact remains that during operations upon the gland, extreme care must be taken to preserve these small but important bodies.

Indications For Operation: The indications for operation as given by Kocher are:

- 1st. Nodular goitre with nodules undergoing degeneration.
- 2nd. Diffuse colloidal tumors which have resisted medication.
- 3rd. All goitres causing pronounced pressure symptoms.
- 4th. All goitres which produce cardiac symptoms. Many so-called simple goitres show marked heart symptoms, a fact which frequently is not recognized.
- 5th. All goitres which are abnormally situated, such as intra-thoracic goitre.

6th. All goitres which develop suddenly and grow rapidly.

7th. Goitres which are unusually tender upon pressure.

Contra-Indications To Operation: The contra-indications to operation given by the same authority, are:

1st. Respiratory and circulatory disturbances of long standing when due to the goitre with secondary impairment of the vital functions.

2nd. Disturbances of the circulation, the heart action and the respiration due to concomitant disease.

Experience has proven that the ordinary goitre operation is a very safe one, and that the former dangers of hemorrhage, sepsis, etc. have been practically entirely removed by greatly improved technique.

Operative Treatment—Excision is the Method of Choice: The general technique of the operation cannot be taken up at this time, but a few of the most important points should be briefly considered. Practically every goitre operation should be done under general anesthesia. The writer has done several thyroidectomies under local anesthesia, but discarded the method years ago.

The mental effect upon these nervous patients induced by an operation performed upon them while fully conscious much more serious and actually dangerous than is general anesthesia induced by ether given by the drop, open method.

The anesthesia in this as in every other operation should be administered by a skilled anesthetist.

The collar incision of Kocher will be found to be the one most uniformly applicable in these cases, and it is followed by an almost invisible scar.

After section of the platysma, free exposure of the gland may usually be secured by retraction of the sterno-hyoid and sterno-thy-

roid muscles. Their separation will only be found necessary in the case of a very large tumor or one which is very adherent. After stripping off the external capsule, the finger is swept around the goitre, loosening it so that it may be dislodged from its bed. I consider it much more preferable after the delivery of the goitre to ligate the superior thyroid vessels first, as they may then be severed and the goitre still further mobilized, permitting the ligation of the inferior vessels to be made with greater ease and the recurrent laryngeal to be avoided with greater certainty. Extreme caution must be employed to stay within the capsule that the parathyroids may be preserved.

The lobe now having been freed to the isthmus this point of communication is crushed between the jaws of a stout clamp and the stump sutured with catgut, using a lock stitch. Tubular drainage should be used in every case, the tube being removed in 48 hours.

Other methods of dealing surgically with simple goitre are enucleation and resection. Enucleation will be found applicable in very few instances, and has usually proven unsatisfactory. Resection is also an unsatisfactory and difficult procedure, and should only be employed in complicated cases where excision is contraindicated because of involvement of both lobes to so marked a degree as to necessitate the excision of one and a partial resection of the other.

Exophthalmic Goitre: Exophthalmic goitre was first described by Parry in 1825, by Graves in 1835 and by Basedow in 1840. It is generally known in this country as Graves disease, while in Germany it is called Basedow's disease.

The theory of Moebius, who has done much to assist the progress of surgery of the thyroid by his physiological investigation is, that this disease is due to excessive secretion and absorption of thyroid fluid. By some the claim is made that in certain cases of Graves disease there is no enlargement of the thyroid. Kocher states, however, that he has never seen a severe case without some definite change in the gland. The term exophthalmic is many times inappropriate, as the exophthalmos may not be at all marked or may be absent, even in severe cases. The cardinal symptoms of the disease are, tachycardia, nervousness, exophthalmos and more or less marked changes in the thyroid gland. To these may be added many minor symptoms, among which may be mentioned tremor, muscular weakness, Graefe's sign, Stellwag's sign, Moebius' sign, Kocher's sign, paroxysmal dyspnoea and many others.

Time does not permit further discussion of the symptomatology of this disease, but at this time I wish to state that far too many cases are permitted to go unrecognized until they have reached such a stage that relief is out of the question.

I wish to subscribe to the opinion that exophthalmic goitre is in the majority of instances a surgical disease, and that if these

patients are given the benefit of early diagnosis, which should be promptly followed by operation, the vast majority would recover. The exception to the statement is furnished by the very acute form which is soon followed by death.

The importance of the symptoms mentioned above, their early recognition and proper classification, cannot be too thoroughly emphasized. Medical treatment of all kinds has been employed. The thyroidectin of Moebius, the serum of Rogers the milk of thyroidectomized goats and many different drugs have been administered with meagre success.

The results, following operation, have been, during the past few years, much better than those secured by medical treatment, and many surgeons are now agreed that surgery offers the best prospect for relief in suitable cases.

Cases unsuitable for operation are those very acute and very severe cases, which are soon followed by death, and those chronic cases which have been permitted to reach a pitiable stage of toxemia and general bodily weakness as to forbid any such effort at relief.

Operative Treatment: Among the forms of operative treatment which have been advocated for exophthalmic goitre, may be mentioned excision. Ligation of two or more arteries, Jaboulay's excision of the sympathetic and the polar ligation of Staam. Jaboulay's sympathetomy has been discarded as useless. Ligation of the arteries has been followed by tetany when all four were tied as originally suggested and is now principally employed in very extreme cases where excision is contraindicated, two or three vessels being tied as a preliminary to a subsequent excision.

Excision is the method of choice and in the hands of experienced operators, has been followed by remarkably good results, both as to relief of symptoms and operative recovery. In 300 cases Kocher has had an operative mortality of less than 4 per cent.

The operation is performed as for simple goitre, but should never be undertaken by an inexperienced surgeon. The operation must be characterized by rapidity of performance and the minimum of trauma.

Following the operation the onset of acute thyroidism should be anticipated by the administration of enormous quantities of water, either by mouth subsutaneously or per rectum.

Ligation of both superior poles of the thyroid gland was first practiced by Staam of Ohio. The ligature should be of linen or silk to ensure permanency, and should be applied so as to encircle a generous amount of gland tissue at either pole. The superior thyroid artery and vein as well as the lymphatics are included by the ligature. By including the lymphatics, it was hoped to more effect-

nally shut off from the circulation the absorption of the thyroid toxic elements.

This operation has not yet been given a sufficient trial to permit the passing of final judgment upon it.

Theoretically, it appears to have much value.

We have employed it several times in instances where thyroidectomy seemed contra-indicated, and each time with satisfaction, both to patient and operator. It is hoped that the procedure may be given a thorough trial and its exact value thereby determined.

It would not be proper to close this article without reference to the relief which is now available for patients, the victims of post operative tetany.

This complication should not occur, as when it does follow thyroidectomy, it is apparent that either too much of the gland has been removed or that the parathyroids have been sacrificed.

It is a most distressing and serious complication and is often followed by a fatal result. Cures have been effected by the administration of fresh parathyroids from the ox. In one case seen by the writer, relief was secured by the administration of thyroid extract.

Brown of Australia reports a remarkable case in which after exhausting all other resources in a most severe and persistent post operative tetany, his patient was completely relieved by the transplantation of three human parathyroids taken from the donor immediately after death and implanted beneath the left rectus abdominis of the patient. This instance, together with that of V. Eiselberg and the experimental work done by Halstead and others, would indicate that in the near future we may expect parathyroid implantation to remove one of the most serious post-operative complications of thyroidectomy.

The recent articles upon surgery of the thyroid by Ochsner and Thompson, Theodor Kocher and F. J. Shepherd have been of great assistance in the preparation of this article, and have been freely quoted.

Discussion.

Geo. W. Crile, Cleveland: I am sure this audience is very tired of hearing my voice. However, I must at this time give myself the opportunity of expressing the very great instruction and interest with which I have listened to the papers of this program. The last speaker who discussed the subject of the surgery of the thyroid gland, it seems to me has graphically described the present surgical aspect of this disease. Of course, the subject is entirely too large to be discussed in this short space of time, but I wish to express my appreciation of the paper and approval of the general conclusions that the essayist has reached.

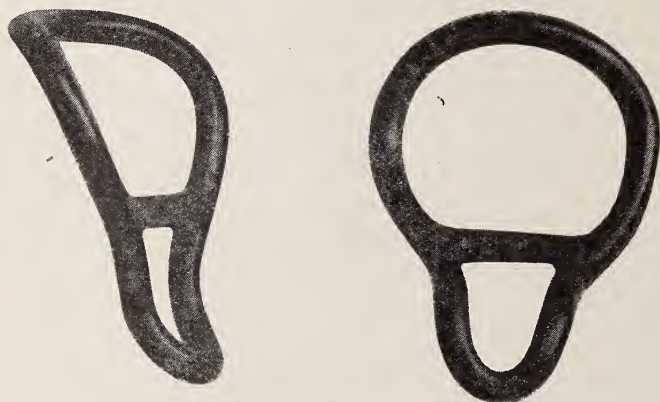
A. C. Stokes, Omaha: Gentlemen: I have been very much interested in the paper. There is really nothing to say, because the classical condition of the surgery of the gland has been so well stated. I would just like to recite one case that has puzzled me very much, and that is this:

In a young girl about twenty-one years of age, with a very severe and acute cases of exophthalmic goitre, we did the so-called Jacobson operation by ligating the superior poles, catching as many lymphatics and veins as possible and the artery. She had before that time all the classical sym-

ptoms of exophthalmic goitre. Inside of a week after that, all those symptoms disappeared. There was no more bulging of the eyes; they seemed to sink right back as much as they ever do; but she began to lose weight. She had a good appetite and was all right in every way, apparently, so far as we could judge. The blood pressure was fair. She lost weight for about two or three months; then she began to get better. That is now about three years ago, but instead of a normal weight of 130 pounds she only weighs 90 or 95 pounds. I would like to have the opinion of some one present whether that is a case of tetany.

Dr. Knott: I don't believe that I can answer the Doctor's question on the amount of evidence furnished, and I doubt if I could if I saw the patient.

WE PRESENT PHOTOGRAVURES OF DR. J. F. H. SUGG'S PESARY, AS DESCRIBED IN THE DECEMBER JOURNAL. THE PHOTOS REACHED US TOO LATE FOR INSERTION LAST MONTH.



THE DISCUSSION OF DR. ROHLF'S ABLE PAPER, PRE-AND POST-OPERATIVE TREATMENT WAS OMITTED LAST MONTH ON ACCOUNT OF LACK OF SPACE. READ IT CAREFULLY.

H. A. Leipziger, Burlington: To the excellent advice that was given by the essayist I think should be added always on papers of that kind more emphasis upon the mental or psychial treatment of the patient. I think that if Dr. Crile in his classical creation on 'Fear and Worry' could have told us that he had discovered the micro-organism of fear and worry, it would be a complete masterpiece. But, regardless of whether fear and worry are due to a psychial or physical cause, one thing is sure; that in surgery and surgical operations we can scarcely over-estimate the influence that fear and worry and anger have upon the getting along of the patient. I am satisfied from what little experience I have had that an infusion of courage pre-operatively will frequently avoid the necessity of infusion of normal salt later on; and that when we can substitute a smile when the patient goes on the operating table, in place of the agonized, startling fear that we so frequently see on his or her face, we can often-times avoid post-operative vomiting.

Lewis Schooler, Des Moines: I only wish to cover one point in regard to the pre-operative treatment, and that is the administration of cathartics previous to the operation. For seven years I have tried by all means in my power to prevent the hospital authorities from giving a cathartic the night before the operation. I have found by experience in that length of time that I have less gas pains, less danger of enteritis, and less danger of discomfort than cathartics or any laxative is used. All of you have had experience in giving cathartics, and perhaps most of you in taking them. It absolutely weakens the patient before the time of the operation.

In the paper it was advised to fill the patient with fluid before the operation. When you give the patient a cathartic you are emptying the fluid. What is the normal condition of the alimentary tract. It is not an empty condition; it is not one in which the bowels contain only a little mucus or fluid or gas; it is a partially filled condition. If the patient is allowed to have the regular diet up to the last meal before the operation, which may be a light one or none at all, he will go on the table in a good deal better condition, and the bowels act better after the operation-with less assistance and persuasion than is usually resorted to in the cases where these cathartics are given. The nearer normal condition the patient is in every way, the better subject he is for an operation; and this applies with peculiar emphasis to the intestinal tract. You will not have more vomiting if you don't give a cathartic; you will have less because you will not have an irritated condition of the intestinal tract from one end to the other. You will not have any unfortunate movements of the bowels after the operation. No one can guess accurately with every patient how many evacuations will be obtained with a given cathartic. With some you may get hardly any, and with others you may get a series that are detrimental to the very best interests of your patient.

L. W. Littig, Davenport: Some time ago the subject of anesthesia was brought up before the Chicago Medical Society, and the experience of Dr. Parks was reported by Dr. Ochsner. Dr. Nancrede of Ann Arbor, spent several days in Chicago attending the clinic, and was very much impressed with the splendid manner in which the patients took ether. He asked the reason. Parks replied: "Because they receive a dose of morphine and atropine one-half hour before operation." At the close of the clinic the head nurse asked Dr. Ochsner what he, Parks, had said. When told, she replied "I never give these patients any morphine and atropine. I was never instructed to do so, the preceding head nurse never said a word about it". I think if Dr. Rohlf had a nurse who, without his knowledge, omitted the morphine and atropine, his patients would do about as well as they do with it.

There is one point in connection with the paper of Dr. Rohlf that I think exceedingly important, and that is the giving of water after an operation, or gastric lavage, whichever plan you choose to pursue. Years ago we used to give these patients ice after an operation, a half a teaspoonful of ice or ice water, and a little champagne; and they would retch and vomit, and we felt grateful if they retained a little bit of ice-water or champagne; and I see doctors doing that today. This is all wrong. If the patient is retching and vomiting after an operation, give him a pint of warm water. If he vomits, well and good; he suffers less. If the water stays, it dilutes the material in his stomach and he is better anyway.

The value of normal salt solution after an operation cannot be questioned. As a routine, I give every patient a pint of normal salt solution just as soon as he is in bed, not because of any condition but simply to relieve thirst. This may be repeated at intervals of several hours until they take water by the mouth.

M. J. Kenefick, Algona: This is a very important subject, because it concerns the general practitioner. A surgeon must co-operate with the general practitioner in the treatment of his surgical cases, and in these brief discussions we can only touch one phase of the subject.

I can agree with everything that Dr. Rohlf said except on the question of cathartics, and there I agree with Dr. Schooler.

Bertha Van Hoosen, Chicago: Mr. Chairman and Members of the Iowa Medical Society: I am very much interested in the part of the paper that I heard. I think I heard almost all of it, but I did not catch one suggestion that I think perhaps the writer may have made, although I didn't happen to hear it. That was in regard to the posture after operation for the prevention of nausea and vomiting. I have been in the habit of giving scopolamin and morphin anesthesia. I give 1-100 gr. scopolamin and 1-4 gr. morphin in three doses repeated twice; that is, I give one dose two hours and a half, one again an hour and a half, and the same dose repeated a half hour before operation. This in itself does a great deal to lessen the nausea and vomiting. But even with this anesthesia we will occasionally have patients with a tendency to nausea and vomiting, and I have been in the habit of placing every patient (unless it is an operation

where sitting is a little uncomfortable), immediately, while still sound asleep, in an upright sitting posture, so that the body is exactly at right angles to the legs—not reclining, but sitting upright; and they come out of the anesthesia sitting upright, remain in that position for twenty-four hours. Then they are allowed, if tired, to lie down. Of course if it is a gall-bladder or stomach case, they continue to sit bolt upright for a few days longer. I have tried several experiments with these patients. When they have been sitting upright for twelve hours and a little tired, I have let the nurse put them down, when they would again vomit. The nurse would raise them up and they would stop vomiting; she would lay them down again and they would begin to vomit and ask to sit up. I have had patients demonstrate to me the fact that when they are sitting upright the fluid in the stomach does not form a puddle, while with the head low down the easiest way is for it to be regurgitated; and if they are sitting upright they do not have trouble with nausea and vomiting, even though they have had chloroform and ether anesthesia.

Then the upright position does another thing that we as physicians appreciate—especially with all the Christian Scientists that we have to work with and against.—It has a wonderful psychological effect. You can remove ulcer of the stomach or an appendix, and even when the patient has been very sick and feels that she is undergoing life-and-death-operation, if she wakens in a sitting posture it is very difficult for her to believe that she is seriously ill; she feels that she is almost convalescent when she becomes conscious.

There is another point, and that is in regard to nephritis. With the scopolamin-morphin anesthesia I have never known a case of pneumonia to develop; so practically never consider that any more; and nephritis or any irritation of the kidneys is a very rare thing. But with chloroform and ether anesthesia we frequently have nephritis, and there is a little suggestion that I got from Dr. Wm. E. Quine, who has had a great deal of experience in consultation with these cases, that I think has enabled me to save a great many cases of acute nephritis following some operations, aseptic or otherwise.

I had a very serious case, a child of six, had an acute nephritis following a simple appendectomy and I called Dr. Quine in consultation. This was about twelve years ago. He told me that I must give digitalis or digitalin or the fat-free tincture of digitalis in heroic doses; and we gave to that child 25 minims, that is, a hypodermic syringe full of fat-free tincture of digitalis every hour hypodermically until the pulse had reached 120; it had been running 150. Three weeks ago I was called in consultation on a case of post-operative nephritis. The patient's pulse was beating at the rate of 170 and 180, counting it at the heart. I immediately ordered 25 minims of the fat-free digitalis repeated every hour until we got an effect upon the pulse; and at the same time, besides making the heart do its very best, we put into the patient one quart of normal salt solution under the breasts, so that the heart had something to put through the kidneys. After giving five doses the pulse had dropped to 130, and then we gave smaller doses. I think this giving of such large doses would appeal one unless he had had experience or the advice of some experienced person behind him.

G. E. Crawford, Cedar Rapids: I fully agree with the essayist in his view of the advisability of thoroughly emptying the alimentary canal before an important operation, whenever it is practicable; that is, when we have the time to do it deliberately; and I am not at all in sympathy with the opposite view that has been expressed. We know that very many of these cases that come from operation—especially abdominal operations—have been constipated for a long time, the bowels are liable to contain scybala which have been there for weeks and perhaps for months; and to operate, with the consequent stasis that will occur as the result of the operation, I think we add an element of danger—a toxic element—which would be removed by carefully and judiciously and thoroughly emptying the alimentary canal. I believe castor oil is one of the best things. To empty the alimentary canal does not necessarily mean to deplete the patient.

Another routine which has been mentioned I think is of vast importance, both for the safety and the comfort of the patient; that is, the routine of administration normal saline after the operation; and in im-

portant operations, where it is advisable to keep the bowels quiet for a time, the plan which we have adopted for a considerable length of time is that of using the Murphy proctoclysis for, say an hour or two out of each four; and then during the interval giving an ordinary nutritive enema containing pre-digested food; this will keep the patient up and give him an immense amount of comfort.

D. S. Fairchild, Clinton: I believe, as Dr. Schooler does, that it is very difficult to persuade the people at a hospital to avoid giving cathartics. We always supposed that it was necessary to give cathartics until cases of strangulated hernia came into the hospital whose bowels were full, and we operated on him and he got along just as well and a little better than the man who had his cathartics constantly repeated. It we put a patient on a special diet for a week, and give him cathartics for a day or so, he is pretty well 'used up' when you come to the operation itself; and we find that the less we do for these patients before the operation the better it is for them.

W. W. Bowen, Fort Dodge: What Dr. Schooler has said is partly true and partly false. If he will give his cathartic in the middle of the afternoon, or at one o'clock in the afternoon, and have his patient's bowels evacuated before night, so that he will have a good night's sleep, he will have a great deal better result than in any other way. If he waits until evening to give his cathartic, and has that patient's bowels moving all night, he is not in very good shape to stand an operation the next morning.

As to the giving of morphine before anesthesia, that is a mooted question, and we can't decide it here. Everybody has his own notions about that. My own opinion about it is that in the ordinary case we should avoid the morphine. In the first place, it complicates the giving of the anesthetic. You know that the most reliable of all signs upon which the anesthetist depends is the pupillary reflex. When you give a quarter of a grain of morphine you abolish that; so you cannot tell how deeply the patient is anesthetized. However, that is a matter of individual opinion very largely, the same as the anesthetic.

As to the post-operative treatment, there is nothing more important. In looking up this question about a year ago I tabulated something over thirty complications and unpleasant sequelae that are likely to follow any ordinary laparotomy. If our patients knew that, the most of them would not submit; they would not hold still. The thing we have always dreaded most following operations has been peritonitis; that has not been mentioned this afternoon. In our experience in the last three years this is not the most dreaded complication following laparotomy. The majority of those who have died in Fort Dodge following an operation have not died from peritonitis. More of them have died from post-operative ileus than any other cause. Therefore we have given a great deal of attention to post-operative ileus, and a few of our patients we have been able to save by re-operation. It is simply astonishing to observe the rapidity with which some of these patients who are in apparently good condition two or three days after operation, their bowels having moved and there being no distension, will in a few hours be in extremis with distension and vomiting; and in the majority of these cases, if we post them afterwards, we will find that we have had to deal with a post-operative ileus.

A. C. Stokes, Omaha: Mr. Chairman and Gentlemen, there is only one point that I wish to make in this discussion, and that is the point that was brought up by Dr. Schooler and emphasized by Dr. Fairchild. I have thought for a number of years that the giving of a cathartic immediately before an operation certainly reduced the vitality of the patient; and following out that line of thought, in a number of operations in which the intestine was not involved—extra-perineal first—we have done the operations without giving a cathartic beforehand. In those cases the recoveries have been just as good, so far as I have been able to see, as where a cathartic was given beforehand, and the patient was in better shape and stronger after the operation. Going a little further, we have taken simple cases of appendicitis, in which there was very little, if any handling of the intestines, and gone through the same procedure without giving a cathartic beforehand; and I can't say but our results have been exactly as good, and the patients have always had a little less shock after the oper-

ation—a little less traumatic effect—than they did with. In fact, I have come to believe that most operations can be done quite as well without the use of a cathartic beforehand, unless it is actual intestinal re-section or something in which the intestine itself is involved.

Dr. Rohlf: I am certainly gratified at the discussion that my brief paper brought out, and it was really because I wanted to hear the discussion and to get the advanced ideas of the members present that I chose that subject. I was a little misunderstood by Dr. Fairchild, for he insinuated that we repeatedly gave cathartics to the same patient for the same operation. The position that I wanted to take was that I believed that a dose of castor oil, not given the night before, but thirty-six hours before the operation, surely cannot work such great distress or do the harm that Dr. Fairchild and those who have taken the position with him seem to intimate. I accept the point of the psychic influence, but I usually leave that to my anesthetist. I find that he is a great deal better hypnotizer than I am, and I am satisfied that he can carry patients along quietly, even though the hypodermic is omitted.

DISLOYALTY TO MEDICAL ETHICS RESPONSIBLE FOR SMALL SOCIETIES.*

PERCY R. WOOD, M. D., Marshalltown, Iowa.

Gentlemen: We are victims of an etiological affection the diagnosis of which I approach with deference, and not without humiliation, when I realize that so noble and philanthropically instituted a profession as ours, should be affected with such a symptomatically iniquitous a malady as that which might be termed Ethical myelitis; though in reality it simulates mental derangement, complicated with cardiac malfunction, and I admit that as to pathology, therapy or prognosis little research has been attempted.

There seems a paresis of certain functions when applied specifically to the brother physician, the pathogenization of which initiates a long line of disagreeable sequelae attended by over secretion of bile and every evidence of a constipated mentality. The individual is overcome with a sort of confre-phobia, if you please. He suspects his fellow practitioner of everything contemptible. It appears that upon the over sensitized plate of his mental camera he mistakes his own distorted image for that of his honorable contemporary, and thereupon become so exorcised that he calls to the surface the very same eruptions and disagreeable symptoms so plainly marked in his fellow. His sense of location, having been disturbed he fails to appreciate his true relationship regarding his clientele, his profession and himself.

Those highly specialized cells, lodged somewhere in the mystic depths of his grey matter, and from which are supposed to emanate the finely differentiated and equilibrated senses of honor, truth and justice, seem to be fundamentally disturbed and their functions abnormalized. Even the visual sense which vitalizes and individualizes the body cell and participates in all nervous processes and which is

*Read before the Marshall County Society at State Center, Sept. 6, 1911.

in fact, but a synonym for fine sense and good judgment has become so distorted that nothing appears natural. He has gazed so intensely upon his imaginary foe that the calcareous and bilious deposits of jealousy and distrust, as they surge to and fro in their membranous confines so gall him, that shrinking back into his six by four bony encasement, in mental torment and spiritual anguish he raises his hands to heaven and exclaims in bitter compassion like the Jew of old, "Oh God, how can anything good come out of Judea?"; little imagining that the disease is soporific and endemic, and that he too has fallen under its blighting influence.

We need a serum. Shall we apply to Koch, Bierring, Ehrlich or Carl Spengler? No. This serum must be centrifugalized from the hidden depths of our own hearts and triturated out of the common experiences of our every day life. A simple, genuine, kindly feeling for all mankind, is the necessity.

"So many faiths, so many cheers,
So many ways that wind, and wind.
While the simple act of being kind,
Is all the sad world needs."

We must arise out of ourselves and educate our instincts and sympathies until they formulate upon our mental tablets a new equation, where you, as well as I, constitute an appreciative quantity. We must have new ideals and more correct and beautifying visions of the purposes of life and the practice of medicine. We must eliminate duplicity and deceit, and depend upon hard work, brains and whole heartedness.

"Root hog or die" may be eminently applicable to the ignoble quadruped that furnishes our bacon, but it is not for us to wallow in the mire of our own selfish greed. This ferocious disposition to acquire at all costs, recalls to mind the cow that fearing her hay wouldn't last till evening ate so rapidly she choked to death. Better be like the optimist who fell ten stories and at every window bar shouted, 'All right, so far'. Its the old admonition of the lilies of the field and the hairs of our head that are numbered.

This is all the result of confusing the means with the end of life. Not, primarily, to accumulate, should we live, but to be useful and to leave to posterity a worthy heritage. This, we can accomplish, only upon high planes of mental and spiritual attainments. Devotion to self is as deadly in its insidious throttling of all virtue and in its productivity of all vices as is a life of single heartedness the potentializing force which beautifies and fructifies. He, who doubts this, interprets incorrectly, the handwriting upon the wall. Yes, physical moral and intellectual turpitude awaits the worshipper of the material. Character is Fate, as the Greeks have it, and we carry our destinies within ourselves.

As we have greater love for mankind and for the best that in

ourselves we will more perfectly appreciate our high calling and will then cease the mercenary tactics which reduces medicine to a commerce rather than a science. We will then by our treatment of our fellow practitioner and our clientele eulogize and immortalize the dignity and sacredness of the profession of medicine in the eyes of the laity, rather than, by disregarding the rights of others and the ordinary laws of courtesy and ethics, as I say, commercialize and debase it.

To do this necessitates being larger than our environment and superior to it. We must appropriate the best, rather than the worst. We should bear in mind always, that virtue is its own reward, and that it is not necessary for us to be smeared by the filth about us. If we are maligned and abused, and our friendships and confidences betrayed we should comprehend the reprehensibleness of such methods, and while condoning, still stand fast to our ideals and display a genuine feeling of good fellowship in return for the ignobleness of others. Thus, will larger hearts, purer motives, and nobler aspirations, and grander and truer conceptions and more lofty ideals eventualize into a purer happiness and a truer success. Petty jealousies, satanic falsifying, reptilian and cowardly insinuations, disreputable counter bargainings and splitting of fees, so common, will then be unknown. There will be no newspaper descriptions of critical cases and delicate operations with the names of the interested physicians attached. Honor and self respect will forbid. Neither will notices appear of operations performed in hospitals, publicly known to be exclusively patronized by this or that physician. Nor will there be mutual benefit cliques hibernating within the societies. These all express the spirit of the wolf in sheep's clothing. They manifest stealth and perhaps cunningness but indicate neither courage nor open heartedness. In those times, concern for the general weal and possession of an individual conscience will retard the general practitioner from undertaking that which requires special training unless he has had that training. He will recognize his own limits as well as those of the specialist's and will not for gold continue to jeopardize life, function, and happiness. Who justifies me in attempting an appendectomy yet physicians generally are undertaking as hazardous operations for which they have had as little preparation, and often with fatal results.

In this new millenium every tub will rest upon it's own bottom. Consciousness of an honest purpose with ability to perform will afford mental equipoise, and give a sustaining confidence that the rewards of sincerity and truth are sure ample and self sufficient.

Gentlemen:- This is the age of the heart, no brawn nor brains alone can win. Faithfulness to high ideals is the ruling spirit. How refreshing is a clean face, free from lines of deceit, greed or lust. It in itself is a fortune and spells success.

Irregular and illegitimate practices must necessarily and do justly provoke contentions and dissensions, and shatter fraternal ties. How can we fraternalize with those we neither respect nor trust? No, not until every man is his brother's keeper, in and out of season can there be fraternal fraternities. No individual, physician or society can realize the best of which it is capable unless energized by pure and lofty purposes. We must replace selfishness by a high sense of honor and an eye single to the common good. Greed is the canker at the heart. It smothers virtue and belittles life. The needful serum then for the resuscitation and rejuvenation of this society is composed of Honor, Unselfishness, Sincerity, Love, and Truth and each of us I opine might benefit by a few weekly intravenous injections.

THE RECENT BURLINGTON EPIDEMIC.*

CARL STUTSMAN, M. D., Burlington, Iowa.

Early in November, 1910, the writer began coming into contact with a group of cases affected by an acute infectious disease to which he was unable to give a name. These early cases occurred among families in the immediate neighborhood of his own home, which accounted for the fact that he was calling for help a little while before he saw the flag of distress flying among the cohorts of his fellow workers in the Burlington field. In two weeks more there was a considerable epidemic prevailing generally in the city, unheralded, unnamed, but just as effective for all that. There is nothing much more embarrassing than our inability to fix with a name an entity which racks bones, splits heads, breaks backs, turns stomachs, and has to be treated with drugs. In the course of time, however, we secured a name which seemed to fit and by the time the epidemic was well on the wane, we realized that we had failed to study systematically and thoroughly a clinical manifestation that is fairly rare.

The contagious character of the disease was marked; in our experience it seemed to be about as contagious as scarlet fever, in some instances running through whole families—adults and children—and at other times attacking one or two members of a household and giving immunity to the remainder.

The disease was ushered in usually by a chill, chilly sensations, vomiting or nausea; more commonly without any premonitory evidence of illness. Often immediately, practically always within a few hours, complaint would be made of pain in the side of the neck, accompanied by swelling of the cervical lymphatic glands behind or beneath the angle of the jaw; these enlargements varied in size

*Read before the Iowa State Medical Society, Des Moines, May, 1911.
Section on Internal Medicine.

from that of a hazel nut to a hen's egg, and rarely even larger. This adenitis was the universally constant manifestation that marked the disease; coming on suddenly, often without adequate inflammatory disturbances elsewhere to mark the atrium of infection. The attendant pain and tenderness usually wholly out of proportion to the size of the infected glands. Sometimes there was a tonsilitis or pharyngitis, but quite as often there was emphatic denial of any soreness whatever within the throat, and the most that could be determined would be a little deepening of the redness of the pharynx or fauces. Temperature ranged between 100 and 103; there were anorexia, headache, backache, general muscular soreness and considerable prostration. In the average case, in from 2 to 7 days, all symptoms would have abated and the patient be convalescent, at any rate from the primary attack. In some cases, especially among children, one or more of the glands would remain very much enlarged, though practically painless, for a period of several weeks after the patient had been apparently wholly restored to health; without the antecedent history these glands could be easily mistaken for tubercular glands. Commonly the glands of one side only were involved; sometimes each side was attacked successively and occasionally both sides were affected simultaneously. Relapse or recrudescence was frequent-occurring one, two and sometimes three times in one case. It was almost sure to occur if the bed was not kept until after the temperature was normal in the evening. Some cases were prolonged beyond this average time given, and some with complications, were ill for several weeks or even several months. There were no fatalities.

A leucocyte count was made in less than a dozen cases and ranged from 14,000 to 38,500. Smears and cultures from the throat of about the same number showed the streptococcus constantly and abundantly present. I heard of but two cases in which there was suppuration in the glands.

The earlier cases were suspected by some of us of being abortive scarlet fever and when we consider that frequently there was vomiting, always a cervical adenitis; temperature ranging from 100 to 103, a high leucocyte count and sometimes a subsequent nephritis, with scarlatina existing in the schools, this suspicion seemed anything but far fetched. Measles and mumps were rampant in the schools and I have no doubt a few of these cases passed for mumps. I made this error once myself on a snap diagnosis; a boy 5 years of age gave a history of a large swelling under the angle of the jaw followed 24 hours later by a similar swelling on the other side; when seen by me presenting the appearance of a well marked case of double parotitis. This delusion was dispelled however about a week later when I was again called and found no abatement in the size of the swellings, temperature 105, puffiness of the face and ankles

and a leucocyte count of 38,500. It is worthy of note that no suppuration occurred in this case.

Glandular fever: Pfeiffer's glandular fever—because first described by Pfeiffer in 1889 receives some attention from the writers of larger text books and encyclopedias of more recent date. A sufficiently full description is given in Osler's *Modern Medicine* to seemingly obviate the necessity of our adding anything to it, but a brief report of the Burlington epidemic seems worthy of being presented to you without apology for the following reasons:

1. Because epidemics in this country seem to have been rather rare.

2. Because it is quite likely that groups of cases will appear elsewhere in Iowa during the coming or succeeding winters, and being thus forewarned you may be forearmed.

3. Because in the Burlington epidemic there were to be noted some variations from the text book descriptions.

4. Because of the size of this epidemic; Dr. West of Ohio seems to have reported the largest recorded number of cases occurring in one community in one season—96 cases in 43 families.

I, myself saw in Burlington last winter no less than 40 cases; two of my confreres say they saw at least 75 each; another reports 30 cases, another 25, another 12, and so on. A canvas of the Burlington profession would indicate that 300 would be a conservative estimate of the number of cases in our epidemic. The liberal discount of commerce could be allowed these figures and still leave an uncomfortable sum total.

Epitomizing the symptomatology of glandular fever as given in the literature, we have an acute infectious disease of children, (adults being rarely affected) with fever, slight inflammation of the tonsils and pharynx, constipation, and adenitis affecting the lymph glands of the neck particularly the anterior cervical. Sometimes the axillary, inguinal, peribronchial, and mesenteric glands may be affected. Temperature range 101.1-2 to 103. Nausea and vomiting common. Torticollis sometimes occurs. Bilateral involvement the rule, but unilateral also noted. Tendency to relapse or recrudescence frequent. Suppuration of glands uncommon, but does occur. Isolated instances of otitis media and parotitis are recorded. Nephritis occasionally occurs.

The noteworthy variation from the above in our cases are:

- 1st. Adults were not rarely affected but comprised, at a rough estimate, about 25 per cent of all cases.

- 2nd. In my personal experiences nephritis occurred oftener than occasionally, 10 per cent of my cases or 4 out of 40 having suffered from this complaint although my confreres were more fortunate in this respect. Furthermore it was not our experience that the kidney involvement occurred in the first stages of the disease, but

on the contrary rather late—one of my cases occurring 6 weeks after the initial chill, after she was up and about attending to her household duties.

3rd. Otitis media occurred not in isolated cases but rather frequently.

I should like to offer a note of warning to any of you who may be introduced to a similar epidemic, and that is to make an examination of the urine from day to day until all possibility of a nephritis has passed. That may save you some embarrassment. This point was nicely illustrated in three of my cases; in two of them the urine was examined as routine measure early in the disease and found quite normal; they seemed to go on to recovery and were dismissed as convalescent; but a week or so later upon being recalled I found in each instance manifest symptoms of severe nephritis with abundant albuminuria, blood and casts of all varieties. In the third case daily examination revealed at first a normal urine, later a trace of albuminuria and a few hyaline casts, and the next day uremia.

Discussion.

J. H. Chittum, Wapello: Having had very recently some rather sad experiences with this same trouble that the essayist has portrayed to you, I want to emphasize Dr. Stutsman's caution in regard to examining the urine in every one of these patients, no matter how mild the case may be. About two weeks ago I was called to see a lady whose children had been having this trouble in a very mild form, and no physician had seen them. She had suffered slightly for about a week. She called me on account of the intense headache from which she was suffering. The first sample of urine that I was able to obtain contained a pronounced amount of albumen. The next day she began suffering with intense dyspnoea, being unable to lie down; and about two days told the story. I had in two families three cases of very unfortunate termination. One child a little more than a year old had what appeared to be a very mild form of this glandular fever, when it suddenly became complicated with erysipelas, which appeared first on the brow. With that child we were not able to secure a sample of urine to know whether or not there was any nephritic complication, but the termination was fatal. In another family of five, parents and three children, all five had the disease. The three children began with what appeared to be a mild form. The little girl, a little more than four years old, had no nephritis, but developed erysipelas of the face and head, and was a very sick child for four or five days, but made a nice recovery. A child three months old from whom we were never able to secure a sample of urine developed erysipelas like the older one; and as the erysipelas yielded to treatment it developed a pronounced anasarca and died of heart failure; and have no doubt that could we have secured a sample of the urine we would have found a nephritis complicating that case. The middle child had no nephritis and no erysipelas, but had a very furious otorrhea; the oldest child also had middle ear involvement.

I would not venture to say the number of cases that we had in the vicinity of Wapello, but the majority of them, I think, were so mild that no physician was called; but the complications that resulted so disastrously made it to my mind urgent that we watch these carefully.

Another complication of part of the disease that I did not notice Dr. Stutsman calling attention to was the enormous enlargement of the liver in a few of our cases. In the case of the lady that died of a complicating nephritis her liver extended on a level with the umbilicus, but in the day or two that she was under treatment it went down until it was almost normal in size. In the baby that I mentioned the hepatic dullness extended below the level of the umbilicus.

W. B. La Force, Ottumwa. Approximately what percentage of these cases had erysipelas an equal number with the nephritis?

Dr. Chittum: I only saw three cases that had erysipelas and as I mentioned, there were only a few of these cases in which we could secure any opportunity to analyze the urine. We had a chance to see but a small percentage at any time, but we could hear of cases that we knew had the disease in mild form.

Dr. Stutsman: In regard to Dr. La Force's query, we had no cases of erysipelas complicating in Burlington. I had heard of the Wapello epidemic, and had been rather under the belief that the infection had nothing to do with the disease but was an accidental occurrence; because in at least three hundred cases we had no erysipelas, and I believe the literature does not mention that complication.

A PRELIMINARY REPORT OF CASES OF TUBERCULOSIS TREATED WITH CARL SPENGLER'S TUBERCULOSIS IMMUNE BLOOD.*

GRANVILLE N. RYAN, M. D., Des Moines, Ia.

Koch's announcement in 1890, of his discovery of a substance, later termed tuberculin, which he used for diagnostic purposes, and curative effect, marked the beginning of a new era in the treatment of tuberculosis. In 1893 Koch submitted his discovery to Dr. Carl Spengler who conducted a large series of experiments, as a result of which Spengler has reported a number of agents in the field of serum therapy, the one under consideration being tuberculosis immune blood, or "I. K." (Immune Korper, which means immune bodies.)

An exhaustive review of the literature pertaining to serum therapy, or the treatment of tuberculosis in general, is not within the scope of this paper, but our experience with this entirely new method and the, comparatively speaking, very favorable results, which we have attained by its use in the treatment of forty-three cases of tuberculosis infection during the past ten months being under the observation of my brother Dr. Charles Ryan, Dr. D. G. Mendenhall and myself, influenced us to lay these results before this association.

Dr. Spengler's tuberculosis immune blood, or "I. K." is obtained from the blood of artificially immunized sheep and rabbits. By a very careful process of maceration in a mortar, centrifuging, decanting, ashing, filtering, etc., the end product, or "I. K." is a clear transparent solution of the entire blood, one cc, of which is equal to one million antitoxic lytic units.

Dr. Spengler claims to have proven that the red corpuscles are the chief production and conservation places of the tuberculosis immune substances, which produce an immunization of those suffering from tuberculosis.

*Read before the Missouri Valley Medical Society, 1911.

Immune Korper, by virtue of its containing antitoxins and lysins manifest a double effect. It is a passive-active operation, the lysocidines dissolving the germs of infection, so that their poisons when reabsorbed, contribute to the active increase of immunity. Dr. Spengler and his associates after a long series of experimental procedures, arrived at and reported their conclusions, the following being extracts therefrom:

1. "Following the injection of tuberculosis poison in healthy animals, the immune substances were demonstrated adhering to the hemoglobin of the red blood cells from which it could be separated, either chemically, or mechanically, the technique of which may be found in Dr. Spengler's article in 1908."

2. In the preparation of "I. K." the three end products of the procedure, namely, 1st, serum; 2d, erythrocytes, and 3d, the leucocytes and discs combined (extracts from the latter two representing the immune substances) were tested for their bacteriolytic, antitoxic, precipitation and agglutination powers, with the following results: (a) In a series of over one thousand cases, the serum of immunized human beings and animals rarely exhibited agglutinating power over one to one thousand, the precipitans slightly higher. (b) The erythrocytes in solution invariably showing agglutination and precipitation power above one to ten thousand, and even as far as one to ten million in animals possessing a very high immunity.

3. The introduction of the antigen in patients who have previously been immunized, causes the stored up immune substances to show the relative change in position as follows: (a) The serum immune substances are increased. (b) The erythrocytic immune substances are decreased at the expiration of about thirty minutes. However, in a few days the erythrocytes have regained their balance, or are over-balanced, and the serum presents a deficiency in immune substances. Therefore, the conclusion that the red blood cells possess the principal source of production and storage of immune bodies. Dr. Spengler believes the white blood cells exert an active influence in the process of absorption above referred to.

4. The lytic and antitoxic constituents and not the agglutinans and precipitans form the immune substances in Immune Korper, or "I. K."; consequently it is the lysins and antitoxins contained in the immune blood which furnish value for a therapeutic and immunizing effect.

5. The lysins produce disintegration of the sheaths surrounding the bacillus tuberculosis, finally attacking and destroying the bacteria itself. This was demonstrated by using two slides, the first as a control slide. Upon the second a drop of the immune blood solution is placed. After staining, the latter slide shows the sheaths of the bacteria destroyed and shapeless, red, waxy spots are visible, with a normal bacillus rarely present.

6. The most marked lytic action occurs in the case of high grade immune blood, the highly diluted lysins producing the most pronounced lysis; which is also true of the antitoxins, but not to so great a degree. This effect is recognized clinically by a return of all lytic symptoms, particularly a rise in temperature, lassitude, increased cough and sputum, anorexia, etc., which had been relieved by the first few injections. This lytic condition is relieved in about 48 hours by a highly diluted relieving dose, usually the strength of the initial dose, which contrary to the action of tuberculin, produces an antitoxic effect.

Patients should be forewarned of the probability of the lysis, otherwise they are disposed to become discouraged and discontinue treatment, when they find their old symptoms returning.

7. "I. K." contains all antigens free. It is polyvalent in the sense of the infection dualism or pluralism respectively. Besides immune substances against the tubercle bacillus, there are present in it also, substances against pus exciters, and other microbes, frequently associated with the tubercle bacillus.

Technique of Preparing Dilutions from the Original Solution.

A syringe with a capacity of one cc, graduated into one-tenth cc, is used (preferably all glass with platinum needles rendering accurate dosage and sterilization by alcohol flame possible). One-tenth cc, of "I. K." being drawn into the barrel, the remaining nine-tenths cc, is supplied from the diluting solution, which may be sterile physiological salt solution, or better, a carbol-sodium chloride solution slightly alkalized, alkalization of the latter varying the proportion between antitoxic and lytic effect within certain limits. This is thoroughly mixed in the barrel by agitation, and nine-tenths cc, of this dilution is put into receptacle marked dilution No. 1. This procedure is repeated until serial receptacles up to No. 7 each contain nine-tenths cc,; the last receptacle receiving the full cc, and representing the original "I. K." solution.

The therapeutic effect desired is accomplished in one of two ways: 1st, rapid immunization (shorter intervals between treatments with large doses exhibited), or 2d, slowly progressive immunization (longer intervals and more gradual increase in dosage). The methods of administration are by hypodermic injection, subcutaneously, or by injection. The injection method is not so intense or quick of action, but should be given preference in children, and in patients who fear injections if one desires certain effects.

After thorough physical, chemical, microscopic examinations, and classification of case, we began treatment by the administration of one or two-tenths cc. of the seventh, sixth or fifth dilution; the interval between the first and second injection being twelve to fourteen days, thereafter dosage and intervals depending upon the response of each individual patient. In our cases the intervals have

been from six to eight days, and the increase in dosage from two to five-tenths cc. passing progressively through the dilutions until finally reaching one cc. of the original "I. K." solution in adults, and from one-tenth to two-tenths cc. in children. Patients showing a persistence of symptoms at this stage, are held at this maximal dose for a time, then if necessary, we give a rapid immunization, or work from the original "I. K." solution retrogressively to the dilution No. 7.

Clinical Data. Patients are instructed in taking temperature and pulse four times daily, recording the same on small charts provided for the purpose; the weight, amount of sputum, etc., is tabulated with other symptoms at certain intervals.

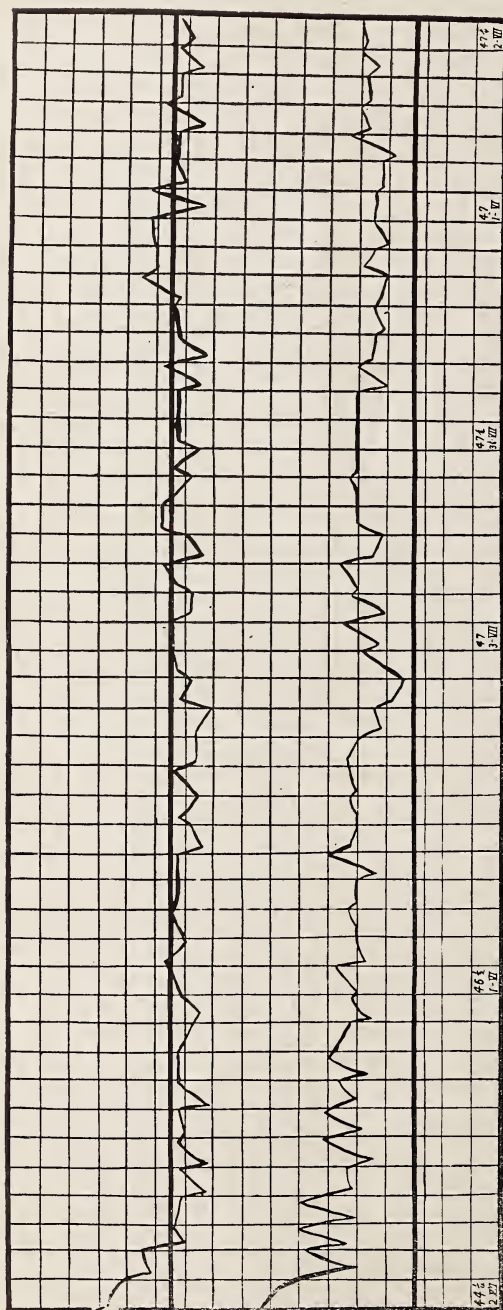
We have accepted cases in all stages and forms of the disease as they came in for examination, not only with the hope of relieving, or arresting the progress, but also to ascertain the possibilities of "I. K." therapy.

This treatment may be and is combined with every recognized treatment of tuberculosis in general, care being exercised in the administration of antipyretics which tend to mask the temperature. Iodine albumens, digalen preparations, etc., are advised in certain complications.

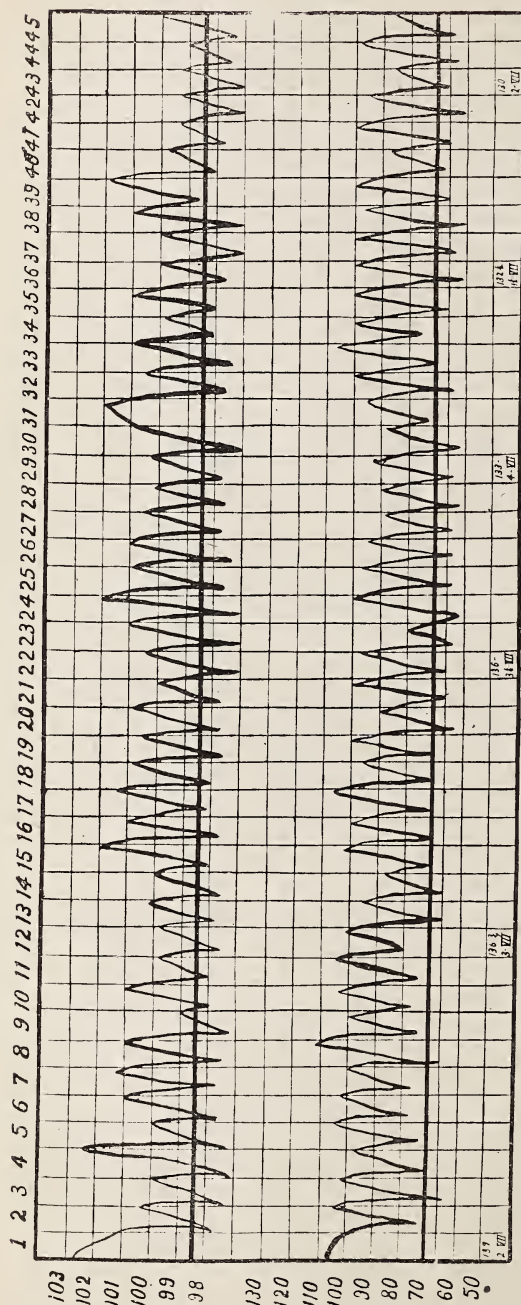
Report of Cases. I will now call your attention to the accompanying charts, which show 45 days of the clinical course:

A New State Journal: The Journal of the Iowa State Medical Society makes its debut into the society of medical journalism under date of July 15, 1911. Dr. D. S. Fairchild, of Clinton and Dr. C. A. Boice, of Washington, constitute the editorial staff. The first number of a State Journal may be pardoned for any air of hesitancy that may pervade its pages. Usually, the editor is selected from the ranks, and is not sure of himself in his new field. We find no evidence of lack of confidence in the Iowa Journal, on the contrary, the editorial utterances are clear and positive, and the general make-up is good. There are 48 pages of reading matter, and no advertising. For the present there is to be no advertising section. This policy was settled upon by the managers on the ground that it is hard to separate the goats from the sheep in the advertising pasture, despite the assistance of our rather competent shepherds, the Council of Pharmacy and Chemistry, and that goat meat is not good for the ethical digestion. We congratulate the Iowa State Society on its idealism, and would that there were more consciences in medical journalism nearly as keen. But we would call attention to one point that has been overlooked: It is to the advantage of the physician to have ethical advertising placed before him, that he may know what to buy, if he should happen to want to buy anything. Another thing, clean advertisers are entitled to space that is clean in which to present their claims to patronage, and it is up to those of us who have seen the light through the clouds of commercialism to give it to them. From its present independent stand, the Iowa Journal is in splendid position to enter the advertising business, selecting as it goes along the very pick of clean business, thereby placing an envious premium on its advertising space.

May you live long and prosper.—Texas State Journal of Medicine, August, 1911



No. 2. C. H., acute miliary; age 7; school boy; family history positive. Developed delayed resolution of broncho-pneumonia. Classical symptoms, sputum positive. Placed upon treatment May 31, 1910. Weight 44 pounds. Distressing, productive cough, copious night sweats; restless; appetite poor. Rapid clearing up of clinical symptoms. Discharged November 1, 1910, weight 52 pounds; symptoms nil.



No. 5. G. Y., chronic pulmonary; febrile with complicating infections; duration two years; age 28; occupation clerk; family history negative. Classical symptoms quite severe; sputum positive. Began treatment June 10, 1910. Weight 139 pounds. Physical condition not good; extremely nervous. Insisted upon living at home, necessitating a trip of fifteen miles overland, and fifty miles by rail on treatment day. No appreciable effect was manifested, excepting while upon Nichol's iodide of lime. Treatment was discontinued September 15th, 1910.

The remaining cases are grouped as follows: Nine acute cases with satisfactory results; twenty chronic cases with generally good results, except in moribund cases; nine surgical cases with excellent results.

Benohr (4) has reported 130 cases at Davos, all of the severe type, no incipients being accepted. Pumr 46 cases, while Westphal, Hoffman, Hollos, Awtoicrotoff, Schmidt, Weingarten, Selter, Ger-sheim, etc., have all reported favorably as to its efficiency. Alexander (3) reported negative results in eight cases, and in Professor Hochenegg's clinic in Vienna (2) negative results in surgical tuberculosis. In this country Dr. W. J. Woolston, of Chicago, in his report of thirty-five cases at Detroit in September, 1910 (5), said "Dr. Henry O. Eversole, of Los Angeles, California, a former worker in Dr. Spengler's laboratory, and one of the first to use "I. K." in this country in a personal communication reports good results. The Washington State Board of Health in a personal communication, reports that better results have obtained by the use of "I. K." in incipient cases, that have been habituated to relatively large doses of some form of tuberculin, but who have not received any particular benefit therefrom. Also that in old chronic cases, results have been better than in acute cases. However my own results have been better in the acute stages of the diseases.

Conclusions. 1. In "I. K." therapy Dr. Carl Spengler has given us the most effective agent in fighting tuberculosis that has come within our observation.

2. Perceptible lysis may be obviated in a number of cases by adopting the slow method of immunization.

3. The first signs of improvement are found in the subjective condition, lowering of temperature, increase of appetite, freer respiration in dyspnea is present, increase in weight, more restful sleep, decrease in cough, sputum, and tubercle bacilli; also disappearance of rales generally during the first few weeks.

4. It has been our experience that the toxic pulse persists for some time after the disappearance of other symptoms.

5. In moribund patients its value has been chiefly in rendering them more comfortable.

6. Acute colds (to which these patients are highly susceptible) and other complicating diseases, must be dealt with according to indications.

7. In closing we will state that it is too early to make definite statements as to the permanency of results obtained; but up to the present date they are very satisfactory. In view of the fact that we, without the aid of institutional control, have succeeded in obtaining the results referred to, that the majority of our patients have followed their daily vocations during the course of treatment, the environment of some being most unfavorable, prompts us to implore those in charge of sanitariums to give "I. K." therapy a thorough and critical trial.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

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EDITOR	
C. A. BOICE, M. D.....	Washington
ASSOCIATE EDITOR	

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Vol. 1.

Clinton, January 15, 1912.

No. 7

Worthless Drugs.

On the supposition that everything has its use, many plants for which no other could be discovered, have been popularly endowed with curative virtues. Thus we are wont to read that this or that weed or herb has been used by the natives in the treatment of this or that disease. Such a plant is *Cineraria maritima*. It is said to have been used by the natives of South America and to have effected the cure of cataract in the case of a physician, who, after his own skill proved unavailing, tried the remedy of the natives. But the Council on Pharmacy and Chemistry of the American Medical Association (*Journal A. M. A.*, Nov. 11, 1911) is inclined to agree with Dr. Casey Wood, author of "Ophthalmic Therapeutics", who says:

"Still, a few respectable names have been associated with its (*Cineraria maritima*) employment in that capacity and it only remains to be said that the installation into the conjunctival sac of a preparation of this or any other member of the *Senecio* family has about as much effect on the resolution or dispersal of opacities due to organic changes in the lens as pouring the same down the back of the patient's neck."

It is needless to say that the Walker Pharmacal Company which sells *Succus Cineraria Maritima* (Walker) at the rate of \$1.00 per vial will disagree with the conclusions of the Council and Dr. Wood.

Purgatives Before Operation.

Surgeons who oppose the administration of cathartics before operations will find some comfort from reading the views of Prof. Theodor Kocher, Fifth Edition "Operative Surgery," Vol. 1, P 4.

Prof. Kocher says: "Many surgeons dispense entirely with preliminary purgation. The reason for this is quite intelligible. The worst condition of all is when the patient is suffering from an artificial diarrhoea at the time of operation. It has been shown that when an aperient is given the number of bacteria increase as the intestinal contents become more liquid, while they only diminish in a material degree with the abatement of the diarrhoea. It is important, therefore, that the action of the purgative should have ceased by the day of the operation. Soiling of the body will thus be avoided. Two days before the operation the patient is given either one or two tablespoonfuls of castor oil or a dessertspoonful of natural carlsbad salts in a glass of warm water."

Kocher would give on the morning of the operation an enema of soap and water to empty the rectum.

The Society of Medical History of Chicago.

This society recently organized has just issued its first Bulletin, No. 1, Vol. 1. This bulletin has 86 pages and contains contributions from eight well known writers. Among them may be mentioned Howard Kelly, Wm. E. Quine, Henry Lyman, and F. E. Waxham.

"The purpose of the society is to systematically collect and permanently preserve any material which is or will become of interest in connection with the medical history of institutions, organizations, and individuals, especially of the central and western regions. With its central location, this collection will be easy of access to everyone doing research work in medical history which the Society desires to encourage." The secretary requests that any physician who was at any time connected with the early medical institutions in and about Chicago, who later came to Iowa, would correspond with him in relation to any matters of interest concerning these institutions. Address Dr. George H. Weaver, 1743 West Harrison St., Chicago, Ill.

Interest is being manifested in relation to the early medical history in the West, especially in St. Louis, Cincinnati, and Chicago. In the East, several interesting books have been written on the work of the pioneer physicians and many valuable biographical papers have been published in the John Hopkins Bulletin. Thirty-five years ago the editor of the Journal of the Iowa State Medical Society, collected data more or less complete of twenty-three counties including histories of medical institutions then in existence, mostly from men then living, who had been identified with the development of their respective counties or who were personally acquainted with an earlier generation of medical pioneers. We regret to say that we were at that time unable to obtain anything whatever from several counties which had a history well worth knowing and which we still hope to obtain, for instance Lee, Des Moines, Hamilton, Webster, Polk, Linn, Pottawattamie, and others. We trust that material will be sent in to fill the gaps in our own collection. Some future day

we hope to compile this material in book form, illustrated with portraits of early physicians, not for profit but as a tribute of love to the profession of Iowa with which we lived and worked for forty years.

The Journal of the American Medical Association has, through its various committees, especially the Council on Pharmacy and Chemistry, done a great work in exposing fakes, frauds and humbugs. The Pure Food Law requires that the label tell the truth. The Journal and the Association maintain that advertisements tell the plain truth—unvarnished and unadulterated. Quite a few Medical Journals now keep their pages clean. We maintain that advertising should be as clean and as trustworthy as the scientific or editorial departments. It is now time that the profession show its interest in the aggressive and progressive work by withholding subscriptions or contributions to those Journals which offend by flaunting in their advertising pages those things which are known to be unreliable, untrustworthy and dishonest. Entirely too many men, those high in the profession, support these Journals by their contributions.

Malpractice suits are becoming quite common. All too often these suits are instigated, encouraged and pushed by men who have the title of M. D. Sometimes these suits are started as a result of a careless or flippant remark; frequently jealousy prompts a practitioner to cause suit to be started against a competitor; frequently such suits have their beginning in the desire of some one to build upon the foundation of a successful practitioner thereby hoping to be able to establish a practice by discrediting another.

Case records are often of great value. There are times when bed side notes may be of great importance. The custom of taking notes of work done, especially a full record of typhoids, pneumonias, labor cases, surgical patients, accident cases, can not be over estimated. It trains one to be more observant and more practical.

If occasion requires the record of a case in court, notes taken at the time of the treatment are of more value than memory. If you are not one of those who keep care records, begin now. You don't need extensive or complicated systems.

Some time since we asked the secretaries to furnish us a list of all the physicians in the counties, indicating those who were members of the county and state societies. We expect to publish this matter in the March or April Journal. The April Journal will be printed about April 25th and will be a splendid forerunner of the State meeting in Burlington, May. 8 to 10.

Again we want to call your attention to the importance of electing your delegates early and sending the credentials to Secretary Treynor in plenty of time for the State meeting. The Journal will issue about the first of May the complete program for the May meeting, with a descriptive writeup of Burlington, also a full list of the committees and delegates.

It is hoped that we may this year obviate much of the delay, which has heretofore occurred. We want the reports of all standing committees in early enough to allow reprints being made and placed in the hands of the members of the House of Delegates.

The House of Delegates is a more important part of the State Society than many seem to think. Many of the county societies send a different man as delegate each year. This is not good policy. The counties which keep the same man in as delegate year after year confer a great favor on all concerned. No one can become acquainted with the many activities of the various committees at one session. Those men who have been longest in the House, are able to do more and better work for the Society. Our suggestion is that the local societies keep the same man in as delegate as long as he will serve. Thus the best interests of all will be advanced.

The dues of the State Society are due and collectable before March 1. Why not for once have a full report by the May meeting and not make spasmodic efforts throughout the year. As soon as you collect the dues notify Secretary Treynor so that we may be able to have a full and complete mailing list for the Journal. Also be sure to give the post office address when sending in names. The post office requires that we put addresses on the Journals mailed. We know that several men in the state are not getting their Journals, because we don't know the address.

Every little while we hear from some one who has not received The Journal, either through no address being given us, or misspelled, or removed without notifying us.

Mrs. Gertrude Downing Jones, wife of Dr. Harry J. Jones of North English, died at her home, Dec. 30, 1911 and was buried at her former home, Wellman, Ia., Jan. 1, 1912. The sympathy of the profession is extended to Dr. Jones in his bereavement.

HISTORY OF THE LOUISA COUNTY MEDICAL SOCIETY.

W. S. GRIMES, M. D., Wapello, Iowa.

The Louisa County Medical Society was organized April 24th, 1852, at Wapello, Iowa. It evidently is one of the pioneer County Societies of the state. The State Medical Society having been organized in 1851 and incorporated in 1861. At first meeting of the society, Dr. J. M. Robertson, of Columbus City, was elected president; Dr. T. G. Taylor, of Wapello, Secretary; Dr. J. B. Latta, of Grandview, Treasurer. Doctor H. T. Cleaver, John Bell, Jr., of Wapello, and J. H. Graham, of Morning Sun, were appointed censors. At that meeting a Constitution, By-Laws and Code of Ethics was adopted.

It seems that the above named physicians were all that was in attendance at the time of organization. At the next meeting, January 19th, 1853, Doctors H. Belknap, John Cleaver of Cloumbus City, and A. S. Condon, were admitted to membership. Where the latter was located in the county, I have been unable to learn. Dr. John Bell, Sr., of Wapello, was admitted as an honorary member of the society April 16th, 1853. Dr. W. M. Clark, of Columbus City, was admitted at the same time. January, 1854, Dr. B. G. Neal, of Columbus City, was admitted to membership. On January 3rd, 1855, the operation of removing a bar of lead from the stomach of L. W. Bates, was performed by Dr. John Bell, Jr., assisted by Drs. J. M. Robertson, H. T. Cleaver, J. H. Graham and T. G. Taylor. This operation was performed at the home of the patient, a small cabin six miles northwest of Wapello. A full report of the case was made by Dr. John Bell to the "Boston Medical and Surgical Journal", January 19th, 1860, a re-print of which will be attached to this report. (This bar of lead is now in my possession.)

May 23rd, 1855, Dr. W. A. Colton of Columbus City was admitted to membership and on April 19th, 1856, Dr. W. S. Robertson, of Columbus City, was admitted to membership. Some years after this he was elected Professor in the Medical Department of the Iowa State University, which position he held until the time of his death, which occurred in Muscatine, Iowa.

May 28th, 1856, Dr. D. McCaughn of Morning Sun, was admitted to membership. There were no other accessions to the Society until April 18th 1857, when Dr. John Muldoon, of Wapello was admitted. July 17th, 1858, Dr. C. H. Curtis (location unknown to me) was admitted to membership. April 20th, 1861, Dr. S. E. Jones, of Grandview was made a member.

November 16th, 1864, Dr. I. C. Brown, of Columbus City, was admitted. November 15th, 1865, Dr. J. F. Grimes, of Wapello, (a brother of the writer) was admitted to membership. July 12th, 1866, Dr. D. W. Overholt, then at Grandview, but later of Columbus Junc-

tion, was admitted. April 17th, 1867, Doctors J. W. Holliday, then at Morning Sun, now located at Burlington, and O. E. Deeds, of Wapello, were made members.

April 18th, 1871, Doctors A. B. McCandless, of Columbus City, Frank Tustison, of Wapello and B. G. Kimmel, of Winfield, were admitted. May 30th, 1872, J. A. Thompson, of Cairo, and later of Letts, was admitted. April 19th, 1873, W. S. Grimes, of Wapello was made a member and on May 15th, 1873, Doctors H. Ochiltree and S. R. Spaulding of Morning Sun were admitted.

July 10th, 1873, Doctors Thomas Blackstone, of Cairo, S. Dill, of Fredonia and Geo. P. Neal, of Columbus Junction were admitted to membership. November 13th, 1873, Dr. N. W. Mountain, of Lettsville, was admitted.

In April 1874, Dr. J. A. Scroggs, of Grandview was admitted to membership. Soon after he located in Muscatine and later in Keokuk, Iowa, where he accepted the Chair of Obstetrics in the Keokuk Medical College in 1882. He held this position until 1903, when the college was merged with Drake University. He died in Keokuk, August 23rd, 1910. Dr. M. W. Lilly, of Grandview, now of Chicago, was admitted in 1875.

Dr. H. S. Rogers, of Grandview, joined the society in 1878, which membership he held until his removal to Red Oak in 1885. Doctors D. J. Higley, of Grandview, and J. L. Overholt, of Columbus Junction, were admitted prior to 1890, the exact date I have been unable to learn.

From 1887 to 1890 no meetings of the society were held. On April 26th, 1900, a meeting was held in Columbus Junction, when the following named physicians were admitted to membership: D. Y. Graham, W. R. Smyth, W. S. McClellan, of Morning Sun; J. H. Chittum, of Wapello; J. W. and C. S. Clegg, of Columbus Junction, and J. W. Morgan and S. J. Lewis, of Columbus City.

May 9th, 1901, H. C. Brown, of Columbus Junction, J. H. Wallahan and E. A. Sailor, of Wapello, were admitted to membership. October 24th, 1901, Dr. G. W. Armentrout, of Letts, was made a member, and on June 14, 1902, A. M. Cowden, of Grandview, was admitted. September 10th, 1903, Doctors A. M. Rogers, O. G. Messenger, of Wapello, and R. C. Ditto, of Oakville, were admitted to membership.

October 13th, 1904, Dr. F. A. Hubbard and E. C. Rogers, of Columbus Junction, were admitted. The latter is now a resident of Wapello.

It is my belief that the following named physicians were at one time members of the society, the records of the earlier meetings, having been destroyed by fire, I am unable to be definite, they were: Frank Graham, now of Atlantic, Iowa; E. I. Hall, at one time a resident of Columbus Junction, afterward moved south to Louis-

iana. E. F. Latta, a son of J. B. Latta, of Grandview, and formerly a partner with his father; later located at Unadilla, Nebraska, where he died January 29th, 1894.

So far as I have been able to ascertain, this includes all who are and have been members of the society from its organization to the present time. Formerly the meetings were held quarterly and one day's program covered a broad field. To illustrate: At a meeting held April 19th, 1856, the following members were appointed to give "dissertations" at next meeting, viz: Dr. J. M. Robertson, "On General Practice"; Dr. T. G. Taylor, "Obstetrics and Diseases of Women and Children"; Dr. H. T. Cleaver, "On Surgery"; Dr. John Cleaves, "Pathological Anatomy"; Dr. W. A. Colton, "Materia Medica and Therapeutics".

In those days the only means of transportation was private conveyance (there being no railroads in this part of the state). Hotel accommodations not being good, all were entertained at the home of a member where the meeting was held. One pleasant feature was customary, for the wives to accompany their husbands and enjoy the hospitality of the host, which, I assure you, added interest, as well as pleasure to the occasion.

All the original organizers of the society were living when I became a member. It was not only my privilege, but my pleasure to become intimately acquainted with some of them and whom I considered very dear friends. Joining the society one year before graduating from Medical college, I was required to write a thesis on a subject selected by the society and pass examination before the Board of Censors.

Remembering my association with these medical pioneers, I wish to speak particularly of some of them. Dr. J. H. Graham, being the oldest. He was born in Kentucky, April 22, 1823. Graduated from Ohio Medical College March 2nd, 1847. He practiced in Ohio for two years when he came to Iowa, locating at Morning Sun, where he remained until 1869, when he moved to Grandview. After a few years, he returned to Morning Sun, and continued in practice until the time of his death, which occurred June 12th, 1897. Thus, you see, for fifty years he remained in active practice of his chosen profession. Diagnosis was one of his strong points. He often said to me, "When you have made a correct diagnosis, it will be very easy to apply the remedy." He was also a severe critic, and for a time, until I became thoroughly acquainted with him, thought him to be, not only severe, but sarcastic. After I learned to know him, found this was only outward, for beneath it all, his feelings were of the warmest, kindest and most sympathetic. At the time of my admission to the Society, he was one of the Board of Censors, and I assure you no question was left unasked; no criticism unsaid, until I thought he surely "had it in for me." This feeling afterward

gave way to one of admiration, and I always was glad of an opportunity to meet him in consultation and ask his advice in difficult cases. I knew I would get an honest opinion based upon his many years of experience.

Dr. T. G. Taylor, one of the original organizers of the Society, was in active practice in Wapello for many years; was a native of one of the Carolina's. I have no reliable information from which I can give his biography. It has been reported to me "he was not a graduate of any Medical College." His manner was very pleasant and affable, winning the confidence of his patients. He moved to Muscatine, where he continued in active practice until his death, which occurred in 1887 or '88.

Dr. J. B. Latta, another one of the organizers, and a pioneer physician of Louisa county, was born in Ohio November 26, 1823. Graduated from Ohio Medical College in 1849 and located at Grandview, Iowa. I was not as intimately acquainted with him as with some of the other old members, but knew him to be a very competent and successful physician and to have had an extensive practice for many years. He later moved to San Diego, California, where he died November 26, 1896.

Dr. Hiram T. Cleaver was born in Pennsylvania, February 17, 1822. While knowing him, was never closely associated with him, but obtained the following information from his daughter, Mrs. Dr. Scroggs: "He graduated at New Lisbon, Ohio, in 1841. While in that institution his tutor in Greek and Latin was the famous Clement C. Vallandigham, who became so prominent in the history of that section during the Civil war. He read medicine with Dr. T. Green at New Lisbon, with whom he remained for three years. He then formed a partnership with him and practiced there until 1848. He then moved to Wapello, Iowa, and practiced here until 1862. While here he served as State Senator from 1854 to 1858. In 1862 he moved to Keokuk and assumed charge of the Estes House Government Hospital. In the same year he was granted a diploma from the College of Physicians & Surgeons of Keokuk. While there he accepted the Chair of Obstetrics and Gynecology in the college, which position he held until 1881. In 1878 he was one of the five delegates from the American Medical Association, sent to the British and Foreign Medical Association held in Barte, England. He died in Las Vegas, New Mexico, January 11, 1888."

Dr. J. M. Robertson, of Columbus City, while a pioneer practitioner, was not a graduate of any medical college, so far as I can ascertain. He was still in active practice in the county when I joined the society, but it was never my pleasure to meet him. He was reported to have had a good practice and a very successful physician.

Dr. John Bell, Jr., was one of the original members of the society. He practiced medicine at Wapello for some years when he

removed to Davenport, where he remained several years, then moved to Dallas, Texas. He was a very successful practitioner. The operation he performed—removing a bar of lead from Bates' stomach—showed him to be a daring and successful surgeon. This operation was performed before the days of antiseptics, and when very little abdominal surgery had been performed. I had the pleasure of meeting him but once during his life. He died in Dallas, Texas, some twenty-five years ago.

It would afford me pleasure to go down the line and speak of other of the pioneer members of the society with whom it was my pleasure to be acquainted.

I feel I must make mention of Dr. B. G. Neal, who was located at Columbus City in 1848 or '49. At that time he was not a graduate in medicine but in 1856 received a diploma from Rush Medical College, Chicago.

I have been reliably informed he performed a "Caesarean Section" in the early 60's near Columbus City, the only time that operation was ever performed in the county, so far as I can learn. He died a few years ago at his home in Columbus Junction, Iowa.

January 2, 1860. Remarks by Editor Minot:

Gastrotomy.—In a late number we alluded to this operation, performed by Dr. Bell, of Wapello, Iowa, for the removal of lead, eleven inches long, from the stomach. In a reply to a letter to Dr. Bell, we have received from him the manuscript of the article which we print in the present number. It appeared originally in the Iowa Medical and Surgical Journal, April, 1855. It will be seen that the patient is now alive and well. We believe his extraordinary case to be wholly unique in the annals of medicine.

Dr. John Bell was recognized as one of the most successful physicians and surgeons known to the profession in the state of Iowa. He was an honorary member of the American Medical Association, and held the following important positions: Late Surgeon General State of Iowa; Late Surgeon Ninth Iowa Cavalry; late Surgeon Chief Gen. Hunt's Staff, U. S. A.; late Surgeon General National Encampment G. A. R.; Medical Director Department Texas; Surgeon George H. Thomas Post, Dallas.

Dr Bell died at Dallas, Texas, in 1888 and was buried in the cemetery at Wapello, Iowa.

Extraction Of A Bar Of Lead From The Stomach.

From Boston Medical and Surgical Journal, Jan. 19, 1860.

On Christmas day, 1854, I was summoned to see L. W. Bates, aet 32, who, it was said, while performing the feat of running a bar of lead down his throat, had accidentally let it slip, so that it descended into his stomach; but before I left my office, he came in followed by a crowd. I asked him if he had swallowed a bar of lead. He said he had; and that it was nothing wonderful for him to do, as he had swallowed a number at previous times. This was said in a half waggish manner, and being to all appearances partially intoxicated, and having withal the reputation of being an expert at juggling and sleight of hand, I supposed it to be one of his tricks, and this opinion was strengthened from the fact that he seemed to be suffering no inconvenience. I believed it to be a hoax; but to satisfy myself further. I passed a sound down the esophagus into the stomach, but could discover nothing. I sent him away, but in a few minutes afterward he returned, in company with Dr. Cleaver, of this place. After a brief consultation, we again examined the stomach, but with no better evidence of a bar of lead than before. We told him to go about his business, and if it troubled him to let us know. The next day he went to work,

and continued at work four days, when he went home, some six miles from this place, and becoming unwell, sent for Dr. Robertson, of Columbus City.

On Monday, January 1st, Dr. Robertson requested the physicians of this city to meet him forthwith in consultation at the residence of the patient. Dr. Taylor and myself answered the summons promptly. Drs. Robertson, Neal, Cleaver, Graham and Crawford had arrived before us.

The patient was closely examined, and there was found no perceptible external evidence of any foreign body in the stomach; he was comfortable, up and about, and seemed as well as any of us, if we except some paleness, which might have been produced by the regimen enjoined. Instructions were given to keep the patient on a low diet, and open the bowels by a saline laxative; and should any untoward circumstances or symptoms supervene, to notify us at once.

Tuesday, Jan., 2d, 4 p. m., summoned to see Bates immediately. Dr. Robertson soon arrived. Found the patient suffering with considerable gastralgia and abdominal soreness; there had been considerable retching and vomiting of a dark, watery fluid; pulse small and tense; great anxiety, restlessness, prostration, and apparent sinking of the vital powers. The bowels had not been moved. He was very sensitive to pressure over the left iliac and inguinal regions. We were now satisfied that he had swallowed a bar of lead. We prescribed sulphate of morphia to keep him quiet through the night, and fomentations to the bowels, and left him.

Operation.—Wednesday, January 3d. Present, Drs. Robertson, Cleaver, Graham, Taylor and myself. The patient seemed much as on the previous night. He had great prostration and faintness on attempting to rise. The patient having been properly placed and secured, chloroform was administered. It produced, at first, some nausea, and he threw up a quantity of black, fetid, watery fluid. As soon as insensibility ensued, I made an incision from the point of the second false rib to the umbilicus, dividing the skin and the cellular membrane; thence through the abdominal muscles to the peritoneum, which I laid bare the whole length of the incision. I then made a minute opening at the lower end of the section, through the peritoneum, passed in the director, and with a probe-pointed bistury divided it through the entire length of the incision. The division of the peritoneum produced a spasmodic contraction of the muscles of the abdomen, and a large quantity of the omentum and bowels was ejected from the orifice. Increasing the chloroform controlled the spasm, and I replaced the bowels as speedily as possible, and passed my hand inward and upward through the incision, grasped the stomach and immediately discovered the bar of lead and its position. It lay in a direction from right to left, the upper end resting against the wall of the stomach to the right of the cardiac orifice: the lower end in the greater curvature of the stomach, to the left of and below the pylorus. As it was impracticable to reach the upper end, I seized the bar between my thumb and middle finger, and with the fore finger on the lower end of it, I retraced it upward and backward, for the purpose of making the incision in the stomach as high up as possible. I then passed a scalpel in, along the sides of the fore finger as a director, and divided the coats of the stomach immediately at the end of the bar, making the incision parallel with the muscular fibres, and not larger than to admit of the removal of the lead. I then introduced a pair of long forceps, seized and drew out the lead, and placed the stomach in its natural position. The external orifice was closed with the ordinary interrupted suture and adhesive straps, a compress applied, and a roller around the body.

The time occupied in operating was twenty minutes. Considerable delay was occasioned by the protrusion of the contents of the abdomen, which had to be replaced before the operation could proceed. As soon as the effects of the chloroform passed off, a quarter of a grain of sulphate of morphia was administered, and the patient left in charge of a judicious medical attendant.

The following are the notes of the subsequent treatment of the case.

During the afternoon after the operation, the patient was very restless; morphia continued, which procured intervals of sleep. Pulse 83, soft and compressible. At 9 p. m. great restlessness; nausea and sinking of the pulse; constant melanotic regurgitation. Prescribed sulph. morphia, gr. 1-2. Pulse rose—became full and tense. At this time, the salts taken on Monday and Tuesday commenced operating; he had seven operations.

Pulse softened and he dropped into a quiet and refreshing slumber. The patient was kept lying on back. 12 p. m., had a violent attack of vomiting, and threw up about three pints of a dark greenish fluid, mixed with grumous blood; complains of pain in the stomach and bowels; gave him sulph. morph., gr. 1-2; became quiet and slept at intervals until daylight; iced elm water as drink.

Thursday 4th, 10 a. m. Patient quiet; pulse 85 and moderately full; some thirst and fever; complains of pain in the stomach and bowels; says he feels a sensation as though water was dropping on his stomach. Morphine continued at regular intervals; iced toast water, and iced mucilage, for drink. Three p. m.—Pulse 85, rather hard. Bled him ten ounces. Continued morphia. Six p. m.—Complains of nausea, and has frequent alvine discharges; pulse 86 hard; considerable thirst; gave pill of opium. Ordered ipecac and morphia; left powders of opium and acetate of lead, to control the bowels.

Friday 5th, Nurse reports a good night's rest; says the pulse ranged through the night from 70 to 75; no operation from 8 o'clock till 4 this morning; stools watery; complains of nausea; pulse 83, soft; tongue white and dry; considerable thirst; slight cough. Five p. m.—Found the patient complaining of gastralgia, nausea and thirst; frequent alvine dejections; pulse 74 hard and full. Nine p. m.—Vomited; gave morphia and ipecac; patient became quiet. Continued iced mucilage.

Saturday 6th, 4. p. m.—Patient quiet and easy; pulse 80, soft; tongue clean; an itching sensation in the wound; slight tumefaction, and some soreness, of the abdomen; no movement of the bowels since Friday at 4 a. m. Ordered enema.

Sunday 7th, 11a. m.—Patient comfortable; had two dejections. Raised the bandage and made small opening through the adhesive straps for the discharge of pus. Pulse 80; has great desire for nourishment. Directed the bowels to be kept open by enemata. Five p. m.—Is troubled with severe melanotic regurgitation; complains of burning sensation in superior epigastric region; pulse 65, soft; ordered an enema, and solution of bitartrate of potash for drink. Morphia gr. 1-4, occasionally.

Monday 8th, 10 a. m.—Patient quiet; pulse 75, full; face flushed; bowels moved once last night. Examined the wound and found it had cicatrized nearly its entire length; washed and dressed it. Bled the patient ten ounces. Enema and morphia after the bowels move, during the night, should he be restless.

Tuesday 9th, 6 p. m.—Patient bolstered up in bed, and comfortable. Pulse 76; bowels not moved since 8 last night. Ordered an enema. Examined the wound, and found it doing well. Bitart. potass. continued.

Wednesday 10th—Found the patient quiet; pulse 70, rested well through the night; has an intense craving for food; face flushed. Advised some nourishment to be taken. He complained of cramp in the extremities on attempting to move.

Thursday 11th.—Patient tolerably comfortable; some thirst; has eaten too much, and has exercised more than was prudent. Pulse 75 and hard; face flushed; dressed the wound, which is healing rapidly; bowels open. Ordered sulph. morph., gr. 1-4 and ipecac, gr. 1.: abstemious diet.

Friday 12th.—Patient comfortable; says he feels well enough except some pain in the lower bowels; pulse 78, soft; tongue natural; some tenderness on pressure over the hypogastric region.

Sunday 14th.—Found the patient standing in the door; dressed the wound, which looks healthy; tongue slightly coated; bowels inactive; appetite good. Ordered mass. hyd., gr. x., followed by enema.

Wednesday, Jan. 17th.—Found the patient resting quietly after a walk of a half mile. Washed the wound, clipped and removed the sutures and dressed with basilicon cerate, with injunction for bowels to be kept open, and care in diet. Patient dismissed.

Remarks.—It will be observed in this remarkable case, that convalescence was established as rapidly as after the most of the minor surgical operations. The patient was discharged on the fifteenth day after the operation, and has continued well up to this time. He is now residing in this city, working daily at his trade—that of a shoe maker. The orifice in the stomach was made on the left anterior side, and I think about parallel with the pylorus. The opening was just large enough to withdraw the lead. From some cause, probably from the efforts to vomit, a portion of the omentum had been forced out between the sutures, and when the ad-

hesive strips were removed for the first time it was found protruding from one-half to three quarters of an inch. Upon examination with a probe, I found it had formed adhesions on both sides of the orifice. I therefore removed the external portion with a pair of scissors.

After carefully examining the brief suggestions given by authors on this kind of operation, it seemed to me that there were none that would suit this case. Nothing less than perfect control of the stomach could promise success, if success were attainable.

First, the operation must be conducted so as to preserve the stomach from those serious injuries arising from the advised manipulation previous to opening it.

Second, the incision must be made sufficiently high up in the stomach to prevent the escape of its contents (or, should the opening be made into the stomach where the point of the bar rested, the incision must be stitched.)

Third, to make an incision into the cavity of the abdomen, and attempt to manipulate the stomach and bar of lead with instruments, had in it, to my mind, no promise of success, when we recollect that the length of the bar was 10 3-4 inches, and that the stomach must be opened so as to withdraw the bar of lead by its lower end. I therefore adopted what I conceived to be the correct theory, viz: 1st, to open an orifice in the abdomen large enough to pass in my hand, and thereby have the stomach and its contents under perfectly easy and natural control; and, 2nd, to make the abdominal incision in such shape as to command the point of the bar of lead after it had been retracted, without bruising, distorting or even seriously misplacing the stomach.

It may be a matter of surprise that an operation was not done sooner. Our reply to the question is, that an operation of that magnitude was not justifiable as long as there was any doubt as to the lead being in the stomach; the the evening previous to the operation was the earliest time that all doubts of the fact had vanished; and the operation was proposed at the earliest practicable moment thereafter. Although I had seen the patient, in company with other physicians, almost daily after the singular feat had been performed, during all this time, I had not seen one single symptom that was conclusive evidence of the presence of a bar of lead in the stomach.

The length of the bar is 10 3-4 inches, and its weight 9 1-2 ounces avoirdupois.

I would here remark that Mr. Bates has been residing in Kansas Territory the past summer.

Maurice H. Richardson, M. D.—What constitutes a reasonable doubt of benignancy? The "beyond a reasonable doubt of benignancy" is the complement of the slight doubt as to malignancy. When a breast tumor is beyond reasonable doubt, there is not left evidence enough of malignancy for the most radical to base indications of operation on. If any man of experience, examining a breast tumor in a case in which I had the responsibility of decision, should say, "I am by no means sure of this being benign; I am afraid it is cancer," I should call that enough doubt of benignancy to justify operation on that tumor. If, for example, everything favors a benign growth but the feel of the tumor, I should say that the slight doubt founded on the feel demanded operation. If the time of life were favorable for cancer, pain, perceptible axillary lymph-nodes, a marked family history of cancer, short duration, rapid growth adherent and dimpling skin, retracted nipple—any one of these favoring cancer, the other evidence favoring benignancy—would lead me to operate. Of all the signs of cancer, the one that alone indicates operation most strongly is that which fails, through the tactus eruditus, to satisfy the surgeon of benignancy, or to remove his last fear of cancer.



Dr. Fred Albert.

It is thought fitting to add to the Archives of the Journal a biographical sketch of the late Dr. Fred Albert, for purpose of record and as a tribute to a deceased member who has contributed so much to the good work of the Society, and always been so loyal to its interests.

Dr. Fred Albert was born in Reinbeck, Iowa, March 20, 1882, where he spent his boyhood. He completed the course in the Reinbeck High School in June, 1899, and in the fall of the same year entered the State University of Iowa, taking the combined Liberal Arts and Medicine course. He graduated from the College of Liberal Arts with the degree of Ph. B. in 1903, and received the degrees of M. S. and M. D. in 1906. His thesis for the degree of M. S. was "The Study of Blood Pressure Findings in Disease Conditions", which was a contribution of very high merit. While at the University he was a member of the Philomathian Literary Society, the Middletonian Medical Society, and the Phi Rho Eigma Medical Fraternity. He was also a Fellow in the Department of Internal Medicine. Immediately after graduation he located in Mason City, Iowa, forming a partnership with Dr. C. F. Starr, a classmate, which partnership continued until the death of the former. He was appointed health officer of Mason City in 1907, during the first year that he located in that city. This position he held until the time of his death. For two years he was Secretary of the Iowa Health Officers' Association; for one year its Vice-President, and at the time of his death was President of the association. He was a member of the Cerro Gordo County Medical Society, the Cedar Valley

Austin-Flint Medical Society, the Iowa State Medical Society, and the American Medical Association.

In 1908 he was married to Miss Gertrude Gittens, of Williamsburg, Iowa. A daughter was born to them in November, 1910. He died on July 21, 1911, at Mason City, after three weeks' illness with typhoid fever, at the young age of twenty-nine years and three months.

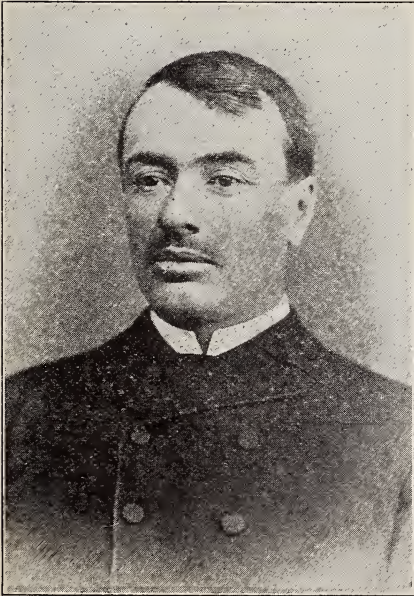
Members of the family now living are wife and child who have continued to make their home in Mason City; his parents, Mr. and Mrs. Fred Albert of Reinbeck, Iowa; three brothers, Louis of Reinbeck, Dr. Henry Albert of Iowa City, and Otto of Fayette, Idaho; one sister, Mrs. Henry Schmidt also lives at Reinbeck, Iowa.

Doctor Albert contributed to the program of the last meeting of the State Medical Society held in Des Moines, Iowa, in May, 1911, by presenting a paper in the Section of Medicine, on the subject of "The Symptomatology of Anemia", being one of three papers in a symposium on Anemia, arranged for this meeting.

He took active part in promoting the interests of his County Medical Society, and frequently contributed to the scientific programs of its meetings. He was devoted to his duties as Health Officer of Mason City, and during the time when the city suffered with an extensive epidemic of acute poliomyelitis in 1910 he rendered most efficient service.

The fact that he was honored with the positions of Secretary, Vice-President, and President of the Iowa Health Officers association clearly indicates the part that he took in the important work of this organization.

With his excellent education, personal charm, fine power of address and exposition, and ability for hard work, he combined the qualities for a life of unusual opportunity for good as a physician and member of society, so that his untimely death gave rise to the keenest regret and sorrow wherever his name was known.—Walter L. Bierring, M. D.



O. E. Evans, M. D.

In the December Journal, p. 333, we noticed the death of Dr. O. E. Evans, of Gowrie. We herewith present his likeness, together with an appreciation of him:

O. E. Evans, M. D., of Gowrie, Ia., is a pioneer physician of the town, locating here in 1872, soon after the place was organized. He is a native of Iowa, born in Clinton county, in 1846. His father, Lyman Evans, was a native of New York, and a pioneer of Clinton county, where he settled in 1839. Our subject received his primary education in the schools of De Witt, and at an early age began clerking in a drug store. In 1864 he enlisted in the war of the rebellion and served as a member of the Forty-fourth Iowa Infantry until the close of the war, in Tennessee and Missis-

issippi. He began the study of medicine with Dr. A. W. Morgan of DeWitt, and remained with him four years. He attended a course of lectures at the Western Reserve College at Cleveland, Ohio, in the winter of 1869-70, and returning to DeWitt accepted an offer to go to Galveston, Texas, where he remained a year. He returned to Iowa, and, as before stated, located in Gowrie in 1872. In 1878 he took a course of lectures and graduated from the College of Physicians and Surgeons at Keokuk,

Iowa. Dr. Evans has gained the confidence of the people. He is a permanent member of the American Medical Association and the Iowa Medical Association, and is also a member of the Grand Army of the Republic Simmons Post. Dr. Evans is a genial and pleasant gentleman, and not only as a physician, but also as a member of society, is esteemed by his fellow citizens.

The Jefferson County Society held its annual meeting and dinner at the Leggett House, Dec. 8, in Fairfield. This program was rendered: Mouth Breathing in the Public Schools—L. D. James.

Typhoid Vaccination—J. S. Gaumer.

The following officers were elected for 1912. Pres. J. S. Gaumer; Vice Pres. S. K. Davis; Sec'y-Treas., L. D. James; Delegate, J. S. Gaumer; Alternate, E. G. Groves; Censors, 3 years, E. G. Groves, 2 years, C. C. Tallman, 1 year, A. S. Hague.

The secretary makes his appeal with this prayer:

"That I may have the co-operation of the members of this society when asked to prepare papers.

That I may have a large attendance at each meeting so that the members who have prepared papers will feel they have an eager audience before whom to present them.

That I may have every Physician in the county a member of this society before my term expires."

The Iowa Union Medical Society met in Cedar Rapids, Dec. 12, under the presidency of D. C. Brockman. The program was as follows:

Surgery of the Upper Air Passages in Children, Dr. H. W. Ivins, Cedar Rapids; Biologic Therapeutics, Dr. L. Rupert, Muscatine; The Latest in Radiology, Dr. J. Rudis-Jicinisky, Cedar Rapids; Dudley's Operation for Pathological Antelexion, Dr. J. Lynn Crawford, Cedar Rapids.

Some Phases of Medical Practice in Porto Rico, Dr. C. E. Ruth, Ponce, Porto Rico; The Recognition and Treatment of Empyema, Dr. C. P. Howard, Iowa City; Clinic, Children's Diseases, Dr. I. A. Abt, Chicago; Recent Epidemic of Typhoid Fever at New London, with Special Reference to Anti-Typhoid Vaccine, Dr. F. C. Mehler, New London; Vaccine Therapy, Dr. H. M. Decker, Davenport.

The Monona County Society held its annual meeting at Onawa on Friday, Dec. 8th, and elected officers for 1912 as follows:—Dr. A. A. Gingles, of Onawa, President; Dr. A. L. Allison, of Rodney, Vice Pres.; Dr. Fred Spearman, of Whiting, Secretary; Drs. J. N. Hoit, of Whiting, and E. Twining, of Onawa, Censors for 3 and 2 year term respectively; Dr. E. Twining delegate to the State Medical Association with Dr. Fred Spearman as alternate. An address was delivered to the society by Dr. E. Hornibrook, of Cherokee, giving some of his experience in the practice of medicine during the past 50 years, and comparing past with present methods of instruction. A vote of thanks was passed at the close of address.

The Iowa and Illinois Central District Society met in Davenport at the Commercial Club, Jan. 11, 1912 at 7:30 p. m., under the presidency of H. M. Decker. L. W. Littig is Secretary.

1. Clinical Cases, 5 minutes each. 2. Intestinal Parasities. Henry Matthey, Davenport, 20 minutes. Abstract: Varieties, symptoms, diag-

nosis, remedies found most effectient. Discussion opened by J. P. Comegys, M. S. Dondanville. 3. Some Things I Saw in Europe. E. M. Sala, Rock Island, 20 minutes. 4. Duodenal and Gastric Ulcer. Nelson M. Percy, Chicago, 40 minutes. Abstract: Symptoms, relative importance of clinical history, gastric findings, blood in vomit and dejecta, etc., treatment. Discussion opened by: D. S. Fairchild, S. B. Hall. 5. Gastric Symptoms Due to Non-Gastric Pathology. P. A. Bendixen, Davenport, 20 minutes. Abstract: Gastric symptoms of disease of the gall bladder, appendix, pelvis, heart, brain, eye, spinal cord, blood vessels, etc. Discussions opened by W. H. Ludewig, F. O. Ringnell. 6. Voluntary Reports, 5 minutes each. 7. Buffet Lunch.

The Cass County Society at its fall meeting listened to this program: Diagnosis of cancer of uterus, Dr. F. Marguard; Report of a case, Dr. A. Zook.

M. F. Stults of Wiota was elected president for 1912; U. L. Mullins of Atlantic as vice-president; Max Emmert of Atlantic as secretary; treasurer, H. E. Campbell of Anita as delegate with Max Emmert as alternate.

The Mills County Society met at Malvern on Dec. 7th. Dr. Merritt having removed from Emerson, Dr. Edgar Christie, vice, in the chair. Drs. Macrae and Tubbs of Council Bluffs took part in the discussions. Papers were read upon "The Treatment of Cancer," Appendicitis, non-surgical treatment." "Gall-stones," "Tuberculosis", remarks upon advertising matter in the Iowa Medical Journal. Delegates to state society. The society was dined at the Cottage hotel by Campbell Scott, Huber and McCue. Mayor Cook welcomed the society to Malvern. Assisting at the banquet were Mrs. Drs. Scott and Campbell. Officers elected for 1912: President, Edgar Christie, Hastings; Vice, Dr. Scott, Malvern; Sec-Treas., J. M. Donelan, Glenwood; Place of next meeting, Silver City.

The Jones County Society met in Monticello, Dec. 5th. B. H. Chamberlin read a paper on Inflammation of the Cecum and Vermiform Appendix, the Etiology: A. G. Hejnan one on Inflammation of Cecum and Appendix, the Treatment; Paper, with report of cases by Seward White: Angina Pectoris by W. W. Hunter; Intercostal Neuralgia by Aileen B. Corbett; Amaurotic Family Idiocy, presenting a case by T. M. Redmond.

The twenty-eighth annual meeting of the Marion County Medical society was held in the assembly room of the court house, Thursday, December 14.

Morning—11 O' clock—Reading of minutes. Applications for membership. President's Address. Adjournment. Afternoon—1:30— "Relative Importance of Pediatrics", H. L. Bridgman, Columbia. Pneumonia, C. N. Bos, Pella. Typhoid Fever, J. M. Weiss, Knoxville. Report of cases. Election of officers. Miscellaneous business.

The Jasper County Society met in the assembly room of the new court house December 19 with the following program:

Sero-Diagnosis of Syphilis, Dr. Harry Engle; The General Practitioner as a Surgeon, Dr. Harp; Class Legislation, Dr. M. R. Hammer; A New Application for the Sulphide of Calcium, Dr. Perry Engle.

The following officers were elected for the coming year:

President, Dr. E. T. Besser, Newton; Vice-President, Dr. Perry Engle, Newton; Sec'y. and Treas., Dr. Harry Engle, Newton; Board of Censors, Dr. L. C. S. Turner, Colfax; Alternate Delegate to State Society, Dr. M. R. Hammer, Newton.

At the annual meeting of the Decatur County Society, the following program was given:

Typhoid Fever, Etiology and Symptomatology, Dr. Lindsey; Treatment, Dr. Lyon; Prophylaxis and Hygiene, Dr. B. L. Eiker; Obstetric Hints, Dr. F. A. Bowman; Clinic, Dr. Coontz.

The following officers were elected:

President, Dr. Lovlet; Vice-President, Dr. F. A. Bowman; Secretary, Dr. C. H. Mitchell (re-elected), Treasurer, Dr. H. R. Layton, Censor for three years, Dr. B. L. Eiker; Censor for two years, Dr. Lindsey; Delegate Dr. O. W. Foxworthy.

All but three of the members, and two visitors were present. The next meeting will be devoted to pneumonia.

You should belong to your County and the State Society because it is the only organization of progressive physicians; all the reforms and advances in medical education and requirements come by way of the organized profession; all the restrictions of irregulars and quacks and all the advancement towards pure food, pure drugs, good hygiene come from the same source.

You should have a part in the progress being made and not sit idly by and reap benefits, where you have not helped in the putting in the crop.

For your \$3.00 annual dues to the State Society you get the benefit of the malpractice protection. This has been proven a great boon to the members; you get the Journal of the Iowa State Medical Society, which contains all the transactions of the State Society, as well as numerous other clean, progressive, scientific papers. The Journal publishes over six hundred pages a year—itself a volume worth more than the dues.

You are a member and have a part in all the progress and advancement in the medical sciences.

We expect to be able to carry advertising at an early date. Only clean advertising will be admitted to the pages of the Journal.

Will you not do your whole duty in getting any eligible man in your county into the Society. Such a course will be mutually helpful.

Remember that the Journal wants the programs from every county and district society in the state.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

D. S. FAIRCHILD, M. D.....Clinton
EDITOR
C. A. BOICE, M. D.....Washington
ASSOCIATE EDITOR

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NECROSIS OF THE MAXILLAE.*

L. W. DEAN, M. D., Iowa City, Iowa.

Early last September I thought that I would investigate more thoroughly the necrosis of the maxillae. It seemed to me that this subject while receiving much attention abroad was being neglected in our own country. I have been exceedingly fortunate in having some cases that were to me very interesting indeed and I thought perhaps you might be interested in them.

The most common cause of alveolar necrosis is infection from the root canals of teeth. Owing to the erosion of the crown a canal is infected. This infection extends along the canal to the apex of the root, then unless checked by the dentist, the root membrane becomes infected and pus is formed. This pus does not ordinarily extend along the root of the tooth and appear on the surface because of the intimate adherence of the structures around the neck of the tooth. It extends rather into the substance of the bone, breaking down osseous tissue and usually extending to the surface some where near the apex of the root. (Here it ordinarily ruptures and then we have a discharging sinus.) In the superior maxilla the pus may extend into the antrum of Highmore, especially when the infection is in second bicuspid or the first molar, and result in an empyema of the the antrum of Highmore. The discharging sinus is not always present. the abscess discharging through the canal of the tooth. Two weeks ago I saw a case with a discharge from the canal. After discussing the matter with Dr. Rogers it was thought advisable to treat the canal, thinking that perhaps this would be sufficient. This has been done daily, the canal being cleansed to the apex of the root, the discharge still continues. We must assume that if the infection was confined to the root canal it would be by this time better. I can detect no fluctuation over the apex of the root, there is no discharging sinus, never the less on Saturday I expect to operate and I know that we will find an abscess in the neighborhood of the apex

*Read before the Iowa State Medical Society, Des Moines, May, 1911.
Section on Ophthalmology, Otology, Laryngology and Rhinology.

of the root. The extent of this abscess I do not know. I have found them so large when expecting only a slight amount of trouble that without a careful X-Ray examination I would not care to express a definite opinion. I do not wish to express the opinion that all infections of root membrane should be subjected to surgical procedure, because we all know of acute infections of this structure that have been cured by thorough treatment applied to the root canal, perhaps together with incision over the apex of the root or along the root between the socket and the tooth. This treatment is wholly within the province of the dentist and I do not consider myself sufficiently conversant with the subject to express an opinion regarding it. When, however there is a necrosis of the bone, a chronic abscess, surgical interference is indicated. I know we have good men who advocate puncturing the abscess cavities, irrigation and drainage, instead of a thorough curettage; insisting that with this treatment continued for weeks the condition will usually clear up. When we remember that the larger pockets will not get well with such a procedure, and that it is difficult to tell the size of the pocket, and that these necrosis areas are completely healed after proper surgical procedure, I think that there is no justification for the irrigation plan.

Another element entering into the case is that delay may result in the loss of a tooth that might readily be saved by proper surgical procedure. The operative procedure we have carried out in these cases is as follows:

A vertical incision perpendicular to the margin of the gum is made over the suspected area, the area having previously been made anemic by adrenalin and anesthetized by the use of cocaine. If a sinus is present we follow the sinus down to the necrosis area. The mucous membrane with the underlying periosteum is deflected carefully under the incision. The necrosis area once exposed is thoroughly cleaned out by the use of drills which we have made for this purpose. The walls of the cavity are thoroughly cleansed of all necrotic bone until only healthy bony wall is left. It is quite essential to have drills similar to these in order to get in behind the root of the tooth and be able to remove every bit of the necrotic tissue. After this has been done the dentist who assists at the operation examines the tooth carefully and passes an opinion as to whether the tooth should be saved or not. If he decides that the tooth may be saved, the sources of infection on the root of the tooth must be removed. Usually we find absorption of the apex of the root taking place. The apex of the root should be ground down and thoroughly polished, using these same drills. All diseased areas along the side of the root must be treated in the same way. Then if the cavity is small the deflected periosteum and the mucous mem-

brane which has been carefully preserved can be sewed together and the wound closed.

If the cavity is large I leave in a gauze drain, irrigate the cavity daily with a weak solution of hydrogen peroxide and keep in a small drain until the cavity is filled with healthy granulations and the drain will no longer remain in place.

With the completion of my surgical work the operative procedure is not at an end. Immediately following the operation of the next morning the dentist thoroughly disinfects the root canal. As soon as the wound is clean and the root canal is sterile he obliterates this canal by filling it from the apex of the root to the crown of the tooth.

I have been surprised by the number of teeth that we have saved by this procedure. Incisors especially, that were loose and that seemed almost impossible to save at the time of the operation become nicely fixed and useful teeth. We have not yet attempted to save a tooth that we have not been successful. Where the tooth is yellow and so far diseased that the dentist does not think it advisable to save it at the time of the operation, the tooth should be extracted and the operation completed as previously described. After the tooth has been extracted the operation is much more simple and more easily performed than if this had not been done.

Alveolar necrosis with secondary infection of the antrum is a subject that is so common that it will hardly bear mentioning here. I have had two cases however, that show so nicely the seriousness of neglect of alveolar necrosis of the superior maxilla that I cannot help mentioning them.

One patient had an infected first molar, chronic Highmorian empyemia, acute suppuration of the middle ear with infection of the mastoid and extra dural abscess. A second patient had alveolar necrosis, Highmorian empyemia and orbital abscess. This patient's condition was so severe and she was suffering so much with chronic diabetes that after orbital puncture had been unsuccessfully performed, enucleation of the eye which was totally blind was performed. I justified this procedure in that this woman had only a few months to live anyway and the quickest way to relieve her from pain and suffering and get her home was the plan we followed, and to the patient was the most satisfactory one.

A second case of empyemia of the antrum of Highmore presented to me a problem which I have not yet answered entirely to my own satisfaction. I will give the history of the case in brief.

Patient, Mrs. —, age thirty-one, referred by Dr. Kenderdine, of Peterson, Iowa. Patient came complaining of pain from an opening over the right lateral incisor. About two years ago the tooth had been extracted. The discharge of pus stopped for about six

months and began again and continued to date. The discharging sinus has been opened and curetted a number of times. In following out our routine examination, the right antrum was found filled with pus. Here we had a necrosis of the superior maxilla following infection from a lateral incisor. The question naturally arose as to whether the Highmorean empyema was merely a coincidence or the result of the necrosis. The patient was operated and a quarter of an inch of normal bone was found between the abscess cavity and the antrum of Highmore. There was no other alveolar necrosis. The other sinuses were not involved and I have not been able to say definitely as to whether infection took place through the lymphatics of the bone to the antrum of Highmore or not.

In connection with a Demker operation for the cure of chronic empyema of the antrum of Highmore secondary to alveolar necrosis the question of the closure of the wound has been to me an exceedingly important one. If we do not remove the necrotic bone in the floor of the antrum, there is no difficulty whatever in getting the wound closed. I have seen some cases operated in this way. I have never followed this procedure myself. None of the cases I saw operated got a good result.

It has been my custom to carefully preserve all the mucous membrane and periosteum in as good condition as possible for suturing and then remove all necrotic bone. Then I sew it up as well as possible and if there is left an opening between the mouth and the antrum I have this closed by a dental plate and later when the antrum is well, perform a second operation under local anesthesia and usually with but little trouble succeed in closing the opening between the antrum and the mouth. During the last year we have had only two cases requiring a second operation.

Perhaps it may occur to some that the surgery of the necrosis of the maxillae is a simple subject, one beneath the notice of the surgeon. I can assure you that this is not the case. Three weeks ago I operated on a woman for necrosis of the premaxillary where the whole premaxilla came away as a sequestrum. Again day-before yesterday I operated on a patient that had already had two operations leaving an enormous depression in the superior maxilla. Each of the preceeding operations had been performed for a discharging sinus on the posterior portion of the alveolar portion above. All the teeth had been removed from the canine to the second molar. He said that at each operation the antrum had been opened. Right in the middle of the rather large depression by the preceding operation was a discharging sinus. There was no pus in the antrum. An incision was made in this case rather high up and parallel to the margin the jaw because of the large area involved. An area of necrosed bone rather superficial about an inch in length was found, through

the opening made by preceding operations the antrum was examined. It looked as if it had never been infected. After removing all the necrosed bone a sinus was discovered leading posteriorly and downward. This ended at the apex of one of the roots of the second molar. This had been the source of the continued infection. The second molar was removed, all the rough bone in its socket drilled out. During the operation great care was exercised not to tear the mucous membrane, especially around the socket of the tooth. The wound was closed, the socket was also sewed shut and yesterday the margins seemed to be nicely in apposition. I have found that the use of great care and seeing that every cut is made and leaves the tissue so that it may be brought together has much to do with the final good result. I expect this patient to make an uninterrupted recovery.

Again I had a patient with a discharging sinus anterior to the angle of the inferior maxilla, the result of an injury, where it was necessary to expose the whole of the bone from the angle to the sinus and clean carefully before the wound would heal.

Again I saw a patient a few months ago with a discharging sinus near the apex of the chin. Evidently from an infection from a necrosis of the last molar. This patient had been operated on a number of times without results. Operation was refused to us and so I do not know the extent of her necrosis.

Perhaps my most interesting case of necrosis is as follows: Mrs. A. referred to me by Dr. Padgham of Walcott. Patient complained of terrific neuralgia, trifacial, for five years. The pain was on the left side and made its appearance first after the extraction of a tooth and the fitting of a plate. The pain began in the lower teeth, extending through all the branches of the fifth and extending down into the left breast. The patient had been advised a number of times to have the Gasserean ganglion removed before she came into Dr. Padgham's hands. The patient was willing to undergo any operation, however, dangerous to get relief from pain. Upon the inner surface of the jaw, under the anterior pillar of the fauces was an elevation, the styloid process curved outward and extended low down and seemed to almost touch the inferior maxilla, if it did not touch it. The elevation on the bone was adjacent to the styloid process. Pressure at this point produced most excruciating pain. Rather than resort to the serious operation of removing the Gasserian ganglion we resected two and one-half inches of the dental nerve through a hole made in the ramus of the jaw, curetted the elevation on the inner surface of the maxilla which was found to be necrotic, and removed an inch of the elongated styloid process. The latter was a new procedure to me. I have heard that it has been done recently on a case in Chicago. The result has been in my case a complete cure as far as the pain is concerned.

The difficulties in operating upon necrosis of the inferior maxilla at the posterior part are great. This work can best be done by one who is accustomed to doing tonsillar work.

In connection with necrosis of the maxillae we must not forget the so-called dentigerous cysts. A dentigerous cyst is a bony cyst that is developed at the expense of the alveolar process and also some times of the cavities of the nose, throat and mouth. The cyst is lined by a membrane composed of an underlying tissue layer and an inner epithelium layer. The epithelium is a derivative from which tooth enamel is formed. These cysts are not connected with the nose in any way. They differ from the antrum in this way and in that if they are not infected the fluid stays cholesterol crystals. These cysts may become of great size and produce marked deformities. We had one case that was a typical dentigerous cyst and two that were very suggestive of dentigerous cysts. The two latter were cavities in the wall of the antrum, both of which opened into the antrum but did not communicate with the nose. The first case was a typical dentigerous cyst. The patient complained of a swelling just above the later incisor which had been present for a number of years. It seemed to be responsible at times for a great deal of pain. On pressing on this swelling a crackling sensation was noticed. At the time of the operation the outer wall was found to be thin bone. The cavity was about three fourths of an inch long, one half inch wide and one half inch deep. It was filled with a viscous, yellowish fluid. The bony cavity was lined by an intact membranous wall. It did not communicate either with the antrum of Highmore or with any tooth. The outer wall was removed, the membrane carefully removed, and the mucous membrane sewed together with a very fine result.

Injuries as a cause of necrosis I will not consider. We had one case where the patient had been kicked by a horse on the premaxilla which simulated necrosis secondary to the necrosis of a tooth. We must not however neglect the very interesting and most important subject of necrosis due to unerupted teeth. The patient whom I have already mentioned as having dentigerous cyst had an unerupted tooth on the opposite side from the maxilla.

We have had three exceedingly interesting cases of unerupted teeth. The first was a male, age 28, came complaining of a discharge of pus from the lower jaw on the left side on its inner surface. About the same time there developed a swelling on the external surface of the jaw about one and one-half inches from the median line. Two months ago this ruptured and has also been discharging. An X-Ray plate which I have here shown an unerupted molar in the position shown in this plaster cast. This unerupted tooth was removed and then a curette could be introduced at the opening on the external

surface of the jaw and passed through into the opening on the inner surface. This canal was thoroughly curetted and the wound healed. A second case was a lady about fifty, who came to me with a complaint of pain in the upper jaw. All the upper teeth had been removed there was an erosion of the mucous membrane in the canine fossa with a rough base. I expressed an opinion that it was probably necrosed bone or it might be an unerupted tooth. An X-Ray examination was refused and she was operated upon without. An unerupted canine was removed with a necrosed crown, a most unusual condition. A third case of unerupted teeth was a patient about twenty years old who said that four incisors had been removed and another one was making its appearance. He had no pain or other trouble. Two unerupted incisors were found as shown in the accompanying cast and were removed.

In connection with the work on the jaws it is most essential that a good skiagraph be secured. This is a very difficult procedure unless proper films are at hand. Special films are made for this purpose and they make the procedure a very simple one. Our work was so unsatisfactory until we secured these films that I mention this as a possible aid to any who may desire to do this kind of work.

Discussion.

Dr. H. G. Langworthy, Dubuque, Iowa: It is needless to say that we have all enjoyed Dr. Dean's paper very much. The treatment of necrosis of the maxilla ought to be of considerable interest to us for the reason that the nose and throat specialist has heretofore not made a study of this kind of work and therefore the best method for obtaining a rapid cure in some of the cases is often a puzzle. I know of no other condition where textbook instruction or perusal of current medical literature counts for so little as in jaw necrosis. Indeed one can be found in any of the medical journals. As a matter of fact specialists should subscribe as regularly to the Dental Cosmos and Items of Interest as they do to the Laryngoscope and other strictly nose and throat papers to make real progress along this line. Perhaps the only rule which we can formulate in jaw cases is that when in doubt perform quite a radical intra-oral operation and remove much more bone than would seem warranted to get at the carious pockets and tracts. While an occasional case may respond most beautifully to light curettement or burring along carious tracts and antiseptic irrigation, in the main this will not cure stubborn necrosis leading off from tooth sockets.

In regard to the X-Ray plate I would say there is no question of the information which is secured. Above everything else an X-Ray picture brings out so much negative information showing when there is no trouble at least, that pictures should be taken if possible in all doubtful cases. Although I had come prepared to comment on a number of cases of my own, so much has been already said that I felt that I have little more to add.

Dr. Shore, Des Moines: I regret very much that I am not competent to open discussion of this paper. It is a field in which I am not familiar. These cases of necrosis of the maxilla, the treatment of which I refer to the Dentist. Dr. Dean has practically opened up a new field for the Nose and Throat men, but I am not familiar with it however. It is certainly an entertaining subject. We see occasionally cases of that description coming to our office for treatment, but they are always referred to some good dentist. Dr. Dean comes in closer contact with these cases.

Dr. Amos, Des Moines: I would like to go a little further than Dr. Shore in this discussion. Dr. Dean has opened an important field for the

nose and throat work for the nose and throat specialist. It seems to me there is too much of this work referred to the dentist, who after all is not as well equipped to do the work as he ought to be. I think that as a matter of fact the general surgeon is doing more of this work, and I see no reason why the specialist should not do the work with a better chance of thoroughness than the general surgeon, as he is much better prepared I believe to manage them than any other class of medical men.

I wish we might endeavor to understand and follow the good example set by Dr. Dean to accomplish much more in our special work. I am sure we are all familiar with the work done by Dr. Dean, possibly that want is much more felt in Iowa City than in Des Moines. Of course, we have better dentists. I think one point in the Doctors paper is not quite clear to me. You referred to one malignant case in which you operated, where the patient went home, you did not refer to which home she went.

Dr. Murphy: I would like to know if Dr. Dean expects me to follow him in all these different fields. Last year he took us up into the brain. I am not inclined to follow Dr. Dean in his discussion up, but I am willing to go down with him into the neck and throat.

It seems to me as though all cases of necrosis of the maxilla could be referred to eye, ear, nose and throat men, or any pain in the face, such as facial neuralgia, where the patient comes to us for treatment, especially treatment of the sinuses. I would like to compliment Dr. Dean on his field of work, more particularly this year than last, although he gave us a fine paper last year.

Dr. Dean, Iowa City: You have to have some one experienced in giving an anesthetic for throat and mouth work. You know that requires some special experience, that is if you give a general anesthetic. You have to use the same operative position that you do in operating the antrum, an experienced man to run the drill. The anesthetic is prepared so that not a drop goes down the throat. The same anesthetic that we use for the tonsils, 2 per cent cocain, 1 to 1000 1-2 and 1-2. We have not had any cases of poisoning and only one case of anesthesia that gave us any trouble was one patient who showed a pallor of the skin, slow pulse, etc.

MODERN TREATMENT OF ANEURYSM.*

LEWIS SCHOOLER, M. D., Des Moines, Iowa.

In the limited scope of this paper it will be impossible to enumerate the different methods of treatment, nor is it necessary for the reason that advances in treatment have been so great within the last few years that many of them have become obsolete and yet after all the only new principles involved have been those of asepsis and local anesthesia and the rubber tube. The two stage operation, the flat ligature, the animal and metal legature are all ancient, and in many instances gave excellent results, but were more often failures on account of infection, which not only resulted in the loss of both limbs and life. Bardwell's operation on the large arteries in which he used ligatures made from the aorta of the ox, involved the same principles that is advocated today for large vessels, it was however, more difficult of application especially in the primary operation and the fastening or knotting of the ligature. By primary is meant the first step in circulation test. Again it was originated before the perfection of antisepsis, consequently did not make progress. Metal ligatures were also in use as early as the days of Cooper at least, but

*Read before the Iowa State Medical Society, May, 1911.
Section on Surgery.

never became popular for the same reason. Mechanical and digital compression of long standing and while successful to only a limited degree were practically devoid of danger. Electrolysis; filling the sac with fine wire or needles and electrically treated afterwards are of course late inventions, and at present I think of slight value, and probably will never be accepted by the profession as a standard operation. The treatment of the sac, and the preservation of the vessel by endoaneurysmorrhaphy or in its continuity, after the method of Matas is to our mind the greatest advance of the century.

The method of determining the advisability of operating on the vessels of limbs by means of mechanical compression and the rubber bandage will in the future prove invaluable, and if intelligently applied and the indications carefully observed and interpreted lessen the reproach upon modern surgery. When dealing with the affection as it is found within the thorax and abdomen less progress has been made as indicated above. The wire with electricity seems to be the favorite method. Favorable reports for the time were made concerning the subcutaneous, intravenous and even the indigestion of gelatin, the supposed property of which favors the coagulation of the blood. The theory is more rational than that of the wire, and electricity, because it conforms more closely to nature's method of spontaneous cure. With the gelatin the laminated method is perhaps identical with that of nature, which is always present and occasionally effective. With the wire the fibrin becomes irregularly entangled and cannot give the smooth, even, compact surface as in nature's methods. Yet for the internal aneurysms of the cavities these remain the best methods at our disposal save in cases of difficulty with some of the smaller branches which are rarely diagnosed. In the thorax and abdomen we have little chance of determining the efficiency of the collateral circulation. Compression may be applied over the iliacs extra abdominally or over either of the iliacs by the means of a lever per rectum or the fist but only in rare instances will these methods be of advantage. Rest, starvation, and the administration of iodides are no longer popular, because seldom if ever effective.

There is at present too little attention given to these cases by the general practitioner, and too great a tendency to pass them over with the idea that they are incurable anyway. We could give a respectable list of cases of that character that have come under our observation, each of them claiming that they were advised in the incipency of the affliction that treatment would be without avail. We could also report a number of successful cases where we have operated in spite of the protests of the family physician and in one case where seven or eight physicians protested against the operation on the internal carotid. I am not finding any fault with the men who gave the advice, they were fully up to the average in ability of our

men in the average county seat, but they were possessed with too great an amount of timidity and too small an amount of experience. These remarks are not intended to reflect upon anybody, but to stimulate those who see these cases early to investigate and get the opinion of others having more experience. In connection with rigid asepsis it must not be forgotten that results will be obtained. This includes more than most surgeons are accustomed to in the ordinary work of their operations. Instruments alone should be used in the dissection and manipulation of the tissues. Even the gloved hand should not come in contact with the wound of diseased vessels. This of course implies more than the ordinary experience and dexterity on the part of the operator, but such is the price of success, and I will have to suggest that those who are likely to or even expect to undertake operations of this kind of work begin to practice instrumentation in less important and delicate operations in order to familiarize themselves with the method. Even then I have seen suppuration which I feel certain was due to unclean catgut. Therefore everything connected with the case should be above suspicion. Next of importance is the determination of decision whether to operate or not. This can only be decided by the application of the rubber bandage or by some effective method of arterial compression, this procedure when carefully carried out marks the difference between certainty and recklessness or empiricism, the latter has already been the practice of most surgeons outside the larger hospitals. My earlier experiences were along the lines of specificity as a causative factor in the production of the disease which led to the belief that all cases should receive treatment for the cause before and after operation. Circumstances over which I had no control in a number of cases convinced me that this is not always necessary. If there is an affirmative history the read is clear and our duty unmistakable, but where the history is negative and the condition of the patient fair to good, no time should be lost in trying to disprove the statements of the patient. If the collateral circulation is proven sufficient by the methods mentioned above, and the patient is deemed in good condition, the operation should not be delayed on account of any suspicion that anyone may have conceived as to the underlying condition. While I am not dealing directly with the etiology of aneurysm in this paper, I cannot but express my disbelief of syphilis as a cause in all except a very small number of cases. The modern treatment seeks to save and not sacrifice. Endoaneurysmorrhaphy or the Matas operation, is a derivative of the Antyllian. A short description of the latter will perhaps aid the understanding somewhat in this connection, especially in view of the fact that until lately it was the method of choice and is performed by ligating above and below but close to the sac, incising the sac and turning out the clot, packing with gauze and al-

lowing healing to take place from the bottom. The objections to this operation are three in number: First—danger of infection. Second—the long time in healing. Third—the broad fields of adhesions between the sac and the surrounding tissues. The later methods obviate all the dangers of the Antyllian except at the time of the operation the healing if successful is by first intention and without adhesions of the sac to surrounding tissues. The continuity of the vessel is restored, no raw tissue is left to come in contact with even the structures of surrounding parts. The former made no pretense of preserving the course of the vessel, while the latter method is restorative in many cases and where obliteration divest it of above mentioned objections. The advantages of the oblitative operation performed without loss of tissue and tedious dissection with lessened rather than increased danger need not be discussed at length because hemorrhage is absolutely preventable leaving a clear operative field allowing everything to be done under the guidance of the eye, except in a few situations like the neck, where the first step under local anesthesia leaves nothing to be desired. If the operation for a radical cure is then deemed advisable it is completed under general anesthesia. The use of the flat aluminum band that may have been previously applied, may be either cut off or left to be removed later. The band is sufficiently flexible to be used as an aneurysm needle, and a ligature at the same time. This applies and has its greatest advantage in aneurysm of the neck. The mechanical compress and the rubber bandage being easier of application and without injury to the tissues. Where the difficulty is situated in the vessels of the extremities the pink glow after the removal of the bandage, but with the continued application of the compression of the main artery, is the most valuable sign. This can be carried out by almost anyone, even in the case of negroes where the color is more obscure but only requires more careful inspection.

Operative Treatment. Operative treatment embraces ligation, incision, endoaneurysmorrhaphy, extirpation, vessel-grafting or anastomosis, and amputation.

Ligation may be performed in one of five ways: Anel's, Hunter's, Pesquin's, Brasdoc's and Wardrop's methods.

Fig. 96. Shows the orifices of the aneurysmal sac, in process of obliteration by suture. The first plane of sutures may be made with fine silk, but chromicized catgut is to be preferred. The sutures are reapplied very much like Lembert's sutures in intestinal work; the first plane of sutures should be sufficient to secure complete hemostasis. The orifice of the collateral vessel and the left upper side of the sac is shown closed by three continuous sutures. (Matas, in the *Annals of Surgery*.)

Fig 97. This figure shows a second row of sutures— a techni-

cal detail of the operation which is advantageous, but not necessary in every case. The first row of sutures has been completed and the arterial orifices have been obliterated. As the walls of the sac are usually relaxed, it is easy to insert a second series of sutures which add security to the first row, and, in addition, reduce the size of the cavity, which is to be obliterated by inversion of the skin and surplus sac walls at a later stage in the operation.. This second row of sutures is applied as in the first series, but either the continuous or the interrupted method, with a curved needle and No. 1, 2 or 3 chromicized catgut. Large areas of the surface of the sac are thus brought in apposition, and the best opportunity is given for adhesion by plastic or exudative endoarteritis. If the floor of the sac is rigid or too adherent to the underlying parts, this second row may be omitted, and the operation advanced to the last step—i. e., the obliteration of the sac after suture of the orifices.

Fig. 98: This figure shows the details of the method of obliteration after the floor of the sac has been raised by the second row of sutures. Two deep supporting and obliterating sutures of chromicized catgut are inserted through the floor of the sac on each side. The number of sutures should vary according to the size and length of the sac that is being treated. In the small aneurysms, one of the deep sutures on each side will suffice; in others, two or more on each side may be required to keep the surfaces in close contact. After the sutures are passed through the floor of the sac, the free ends of the threads are carried through the entire thickness of the flap by transfixion. The picture shows the mode of placing these sutures on the left side preparatory to transfixion of the flap. The two sutures on the right side have been carried through a flap and are in position.

Fig. 99. The drawing shows the operation completed. In this figure only two supporting sutures are shown on each side. The skin and sac walls form two lateral flaps on each side of the incision, and readily fall to the bottom of the sac, thus lining and obliterating the entire cavity. A series of interrupted, absorbable sutures are now placed in such a manner as to bring the edges of the skin in contact, several of the sutures including the floor of the sac in their bight (as shown in cross-section in Fig. 100) and thus closing the space entirely in the middle line. The two lateral supporting sutures are tied firmly over small pads or rolls of sterile gauze, thus bringing all the interior surfaces of the sac in apposition.

Fig. 101. Restorative endoaneurysmorrhaphy. The dotted lines indicate the position of the main artery in relation the sac and to the orifice of communication. The object of the operation in this case is to close the orifice of communication without obliterating the main artery. The closure of the orifice with a continued suture is shown in the figure.

Fig. 103. Reconstructive aneurysmorrhaphy. The principle of this operation is precisely like that adopted in the Witzel gastrostomy. The figure shows the soft rubber catheter lying on the floor of the sac and inserted in the two orifices of communication. The sutures are placed while the catheter is in position acting as a guide.

Discussion.

D. S. Fairchild, Clinton: Undoubtedly we are entering on a new era in the treatment of aneurism. The work done by Guthrie, Carrell, Murphy and others have shown what could be done upon these vessels. The essayist has shown very clearly what can be done in a surgical way in the treatment of aneurism. The old method of Hunter, and the method of Antyllus, the method of dissecting out the sac, was to a greater or less extent disastrous in its final results; but if we can accomplish or establish the continuity of the blood-vessel, as has been proposed by Matas, then we shall be able to operate with certainty upon a certain class of aneurisms, operation upon which has heretofore been dangerous. As we all know, Matas has been able to close the collateral branches of the artery; by a process of suturing, that obliterated also the main artery; but now it seems as if it were possible—and Matas has been successful in some cases—in maintaining the continuity of the vessel, and in that place our patient in a very much better condition. Of course, the experiments in the direction of determining the collateral circulation are very important. I don't think that subject has yet been entirely worked out; so that we are not quite sure in all cases, at least. One who is interested in this subject will find in Matas's address before the American Medical Society, recently published, a very full exposition of this whole question from the standpoint of the case, collected up to this time; and also a great deal that is valuable on the history of this subject will be found in Mumford's historical essays covering the whole subject of aneurism. We are also familiar with the fact that the older surgeons made their reputation largely upon ligating the arteries in aneurism, and now I think we have entered upon a field of work that is going to bear most excellent fruit.

Dr. Schooler: There is nothing further to say in regard to this matter except to call attention to the fact that some surgeons—especially those in positions on railroad lines, will see quite a number of aneurisms, and others may have quite a large practice and never see one. A very prominent physician in Chicago told me a few months ago that he had been in St. Luke's Hospital as interne and operator for thirty-five years, and had never had a case of aneurism. He had seen them in the practice of others, and was assisting at the time I saw him in an operation upon a carotid artery where the clamp was used; and under his advice the aluminum band was used for the purpose of occluding the artery. He followed the course with the patient that I have indicated where the primary incision was made and the clamp placed upon the vessel, and the patient taken out of the operating room and brought back in two hours, when it was shown that there was no bad effect upon the circulation of the brain. A general anesthetic was administered and the operation completed in that way.

Fort Dodge, Iowa, December 13, 1911.

Iowa State Medical Journal, Clinton, Iowa.

Gentlemen: At our meeting last night we accepted the enclosed manuscript with accompanying resolutions as signed by committee. A motion was made and passed that we submit the same to the State Journal for publication.

Very truly yours,

J. G. STUDEBAKER, Secy.

DIVISION OF RESPONSIBILITY IN REFERRED CASES.

J. W. KIME, M. D., Fort Dodge, Iowa.

Gentlemen of the Webster County Medical Society: The discussion I present tonight is brought before you after having visited every county medical society in the state at least twice, and many of them three times, during the past three years, and after thoroughly familiarizing myself with what the medical profession is doing in every county in Iowa.

There has been a great deal of discussion both lay and medical, recently, concerning the division of fees between physicians and surgeons and other specialists, and the discussion will continue until a uniform system has been adopted which meets the requirements of the medical practice of today. Medicine is undergoing rapid changes both in methods and in practice. We cannot, therefore, expect the rules which have governed our relations in all matters in the past to be equally applicable today. And they are not. Medicine, today, is a business and must be conducted along business lines. The great number of doctors and the overcrowding of the profession compel the most rigid economy and strict attention to business details if one would succeed in remaining in his profession. Refuse to act in accordance with these facts and note how soon the rent falls behind, the tailor's bill remains unpaid and the family of the doctor suffers for ordinary comforts of life. Deny it as we may, talk altruism as we sometimes do, yet in the end, we have to deal with grocer, and butcher, and clothier and landlord just as the grosser forms of men who make no pretense toward altruism, must do. There is a great deal of sickly sentimentalism and cant and false pretense about the practice of medicine which has nothing to do with the real work of the medical man.

It is true that every doctor responds with cheerfulness to those tragedies of life with which we come in so frequent contact, but these are the common acts of humanity to which all respond under like conditions, and are not peculiar to our profession alone. A man is a man wherever found. It is coming to be accepted to be true that a good doctor is a reasonably good business man. Indeed, he must be in order to keep himself sufficiently equipped for the work he must do. His expenses are enormous if his business be large, and if he is properly prepared to do his work and keep abreast of the times. He must visit the centers of medical knowledge at least once each year or he will soon find that he is dropping behind and his patients are not having the best that the times afford. The penalty paid is in loss of life among those whom he treats. Medicine, I repeat, is a business whose capital stock is knowledge and learning and skill

which can be acquired only by those who keep close to the lines of modern principles.

A few days ago I visited with one of the leading lawyers of the city. In speaking of his success I found that he measured it in the dollars brought in during the year. I find that the success of our men is measured by the same scale, and I do not decry the measure.

Just why any claim should be made to anything else, just why anyone should expect any other measure for the medical profession than that which applies to all lines of modern business, I do not know. I do deny, however, that any other scale exists. Cant, hypocrisy, deceit and lying, do not in any manner affect this belief. Neither do a sense of honor, justice and uprightness cause me to regret that things are not different in our profession from what they are in other kindred lines pursued by men just as able, just as humane, as we. We are no better and no worse than other men with equal ability to our own in other lines of work. We are men; and this should be the highest sentiment to which we should aspire. Let us be men.

Medicine being a business, will be pursued along the lines of modern business methods, and these methods will be followed in city and in rural towns alike. Indeed, some of the best business men of the state are found in the smaller towns. The specialists of note in our profession, as a rule, to be found in the larger cities only.

The city specialist has been too prone to assume that the man in the smaller towns has little ability—or he would not be there. I see no more reason for this assumption in medicine than in other lines of business. Larabee and Carroll were both from small towns. Shaw and Wilson were from rural towns of the state. Hammill of Hancock and Allen of Pocahontas, Smith of Mitchell and Mattes of Sac rank among the leading lights of modern politics in our state. They are likewise successful in the lines of business which they pursue. They are all from rural towns. We must expect the same business capacity and ability among the medical men in the smaller towns that we find in other walks of life in these same places. The local doctor is, therefore, going to look after his own business in a business way. He is not merely a sign board pointing the way his patients should take to other practitioners of the healing art. He is not merely a finder and distributor of cases to those who are connected with hospital service. It you take him to be that kind of a business man you do not know the country doctor. It you take him to be an altruist who looks after all the world, except his own, you do not know him. He is an altruist, who wisely assumes that altruism begins at home, with his own wife and little ones rocked in his own cradle.

The country doctor breathes pure air and plenty of it; he eats

an abundance of good, pure food; he drinks pure water; he is a clean man, his head is clear, and he thinks in a straight line. You can't fool him. You must deal with him on the square or you will be omitted from the deal.

It has been the custom to assume that the family physician parted company with his patient when referred to the specialist; that his interest and responsibility there ceased. Often, the scantest courtesy has repaid the home physician for the service rendered in referring the case. The time has passed, and will not return, when such practice will be regarded. The family physician's responsibility, and his interests, do not terminate when the patient is placed in the hospital and the surgeon, or other specialties, is called in to do some sort of repairative work on some portion of his body. The responsibility of the specialist is small in comparison with that of the man who referred the patient. When the home doctor refers a case to me he assumes a great responsibility. He recommends me and recommends what I shall do. His own reputation is at stake. He is supported or condemned by my management of the case. If I fail he suffers far more than I. My field is the state, his a small portion of the county. If I fail with his patient, only a microscopic point from which I draw my work is affected. His entire field lies just where the patient lives. If death results, I hear little from it, but the family physician must pass the little mound each day in the year. I recall a case in point. Several years ago I referred a case to an eminent surgeon in Chicago. The operation failed of success. The patient cursed me to his dying day, yet I had chosen a surgeon whose name is known the world around. The surgeon pocketed a good sized fee and suffered nothing from his failure; I got nothing, and untold criticism. I deny, and the 100,000 general practitioners of medicine throughout the country deny, that the family physician's responsibility ceases when the patient is referred to another.

The responsibility being divided, and the family physician assuming a large share, if not the greater portion of the responsibility, rightly claims the recognition due him in the management of the case while temporarily in the hands of those to whom he has recommended him. The country doctor recognizes these conditions and he is governing himself accordingly. Nor can we dismiss the subject by a wave of the hand and majestically sit back and announce that the patient is ours, and the responsibility rest on us alone. We will do this but once with any physician who is up to date.

Practically every surgeon in the state has some arrangement whereby he "makes it right" with the family physician. There may be open division of the fee; there may be an assistant's fee; there may be an anesthetist's fee of round proportions; there may be

a fee for coming with the patient; there may be a division of the fee if the patient so understands it; In some way or another the conditions are usually being met.

Now why not meet them openly, as men, and not resort to subterfuge of any kind?

In some portions of the state this appears to have been done and the men have had the principle to stand by and defend what they have done. They have done right, and they have done what they will be compelled to do if they stay in business. Declining so to do, their patients will go to other places where the family physician will be recognized. There is no getting around the issue, it must be plainly met. The family physician demands it, he is right, and he is going to have what he wants. Denying the facts, covering up the transaction, only creates a scandal when the cloak of secrecy is lifted and the scandal is aired. The only scandal, and the only wrong doing, is in the attempt at secrecy and in denying the truth of the matter.

The whole question is now in a disgraceful state of unsettlement, and laymen who have not the merest smattering of the conditions are creating a terrific furor about it.

The profession must settle this question promptly, openly, fairly and honorably to all—to patient, physician and specialist.

This can be done only by a just and equitable adjustment of every claim of all who are parties to the transaction.

There are certain points upon which we should have no difficulty in coming to an agreement:

1. The family physician has in his own hands; the patient depends wholly upon him for wise and safe counsel in his hour of distress.

2. The doctor knows and feels his responsibility in the case and he is going to place his patient where his responsibility is recognized.

3. He has his choice among a number of surgeons or specialists any of whom will do equally good work. He will naturally turn to the man who recognizes the home physician's responsibility in the case.

4. We may put down as certain that the family physician is not going to part company with his case. It would be bad business to do so and he will not do it.

5. The specialist, or hospital, which does not meet the requirements of the family physician will soon find himself beached, for the family physician is master of the situation and he will so govern himself. Now these are facts and they cannot be questioned.

What are we going to do about it? Are we going to expel all the general practitioners, and a large proportion of our specialists,

as unworthy of association with us? We may do so, but we will soon find that while we are perfectly spotless we will also have plenty of time to take care of our spotlessness. We will flock alone, and soon flock out into other callings.

The patient must be treated fairly; the home physician must be treated fairly; the specialist must be treated fairly. The patient must not be robbed, he must not be held up, he must be charged only a reasonable fee for the work to be done. This fee must be paid to physician and surgeon in proportion to their responsibility in the case. Just how much the surgeon receives and how much the family physician, is a matter of no concern to the patient so long as the work costs him no more, whether the fee goes to one or to two men.

Say it is an appendectomy which costs the patient \$150 in all. This is a very reasonable charge to the man in ordinary circumstances. What can it concern the patient where the money goes if he does not pay too much for the work? It does not concern him and all the cry about robbery, fraud, and charlatanry, is the purest buncombe.

The maximum charge for each procedure, whether surgical or medical, should be reasonably fixed for persons in fair circumstances of life; and these charges should be scaled all the way down to nothing, for every surgeon and every physician must give of his time and his ability to the unfortunate and the poor.

I support the belief that the family physician and surgeon or other specialist should share the responsibility, the skill and management of referred cases, and that an equitable arrangement should be made between them as to compensation which should depend in each case upon the responsibility shared by each.

I append the comments of President Voldeng in his annual address before the Iowa State Medical Society, at Des Moines in May, 1911. The address may be found in the Journal of the Iowa State Medical Society for July, 1911.

On page 11 he says:

"From the inquiries within and without the state it is evident that the practice referred to as the 'Commission evil' is on the increase. Discussion in regard to it is no longer confined to members of the medical profession, but the subject is now being discussed by the press and laity."

From information I have been able to gather, I conclude that an alleged unfair and unjust difference in the fees received by the specialist and the general practitioner is to a large extent responsible for the so-called "Commission evil." While the practice which is alleged is pursued by the profession today, is to say the least, deplorable, I am charitable enough to believe that the originators had in mind the cultivation of encouragement of co-operation rather

than competition. If so, I think we must all admit the effort has been a failure. Co-operation, however, should be encouraged rather than competition. If, as is claimed by many, the division of the fee has come to stay, the practice should be made uniform, divested of all secrecy with reference to both patient and physician, and the entire transaction made honorable, respectable and above all, just to all concerned.

I am aware that the regulation of the conduct of the individual members of this society lies with their respective component societies and not with our state or national organization."

The above paper was read before the Webster County Medical Society on Nov. 28, 1911 and was referred to a special committee which reported to the society on Dec. 12th, as follows:

"Your committee to whom was referred the paper of Dr. Kime on matter of fee division beg leave to report, and recommend the endorsement of the sentiments expressed in his paper.

The medical profession of Webster County can speak its mind freely upon this subject without having its motives questioned, for its members have been entirely free from the habit of fee-splitting.

We cannot too severely condemn the physician who peddles his cases about and turns them over to the highest bidder; and the specialist who attempts to get business by giving or offering to give to the family physician more than his services are fairly worth, is to be severely condemned. We recognize the fact that commission giving, or fee division by various methods, has become a common practice in the medical profession, and we believe this subject should be taken up and fully, and openly discussed and fairly settled in the councils of our profession.

Therefore, be it resolved, That it is the sense of the Webster County Medical Society that some system of division of fees be adopted and generally followed, which shall be without secrecy and be fair and just to the patient, family physician, and operating surgeon or specialist.

That we believe a spirit of fairness requires that the family physician and operating surgeon should be paid according to responsibilities which each assumes and bears in referred cases, but that the patient should always know that this arrangement exists.

That we recognize the fact that some method of fee-splitting has become a custom, and we believe the principle involved is true and honorable if rightly applied and the general public be fully taken into our confidence. That we deplore the fact that, heretofore, secrecy has been the rule in this matter, and that sometimes doctors of low ideals have not sought to labor for the patients' best interests.

That we believe the maximum fee collected should be a reasonable one, and that in no case should it cause the patient undue hardship in its payment.

That we hereby deny the charge now so loudly made by the enemies of our profession that graft, extortion, or methods of the charlatan, are practiced by the great body of medical men.

Report unanimously adopted: J. M. Garrett, C. J. Saunders, W. R. Bates, Committee.

THE OLD AND NEW IN MEDICINE.*

R. L. CLEAVES, M. D., Cherokee, Iowa.

In writing this paper I desire to disclaim any attempt to produce a scientific article, for the subject matter hardly calls for it. It is rather a brief review of the practice of medicine for the last half century—my purpose being asked the following questions. Whether the physicians or internists as a body have kept pace with the other branches of medical science, and if not, why not, is a pertinent question? Is the fault with our colleges, or with us, or with both? Is there in our colleges a tendency to depart from the thorough study of fundamental branches that are necessary to lay, broad and well, the foundation of a medical education, and is there not an attempt to crowd too much into a medical education in the time allotted?

Has the larger curriculum of study tended to crowd into narrow limits the more important branches which at a certain stage in the life of a student are so essential to a solid foundation? Has the teaching in our colleges become to a certain extent, impractical and bookish?

I will quote from an article in the November number of The American Medical Journal an extract from the President of the British Association for the Advancement of Science. Professor Thompson says: "In our modern education I see two tendencies which do not favor the development of broad, well balanced men and women. The first tendency is to get away from the concrete and practical to mere bookishness; and the second tendency is to premature and excessive specialization." To continue the quotation, he adds "that the premature specializing injures the student by depriving him of adequate mental culture." In an address delivered at Charles City, our State Superintendent of Public Schools, says that "The American Colleges give too much attention to elective studies and specialization, and that the craze of the latter, has invaded all our educational institutions."

In glancing over the catalogues of half a dozen of our leading

*Read before the Iowa State Medical Society, May, 1911.
Section on Internal Medicine.

medical colleges, I note the changes that have taken place in the last half century. All the schools have added one more year of study and some of them are now considering a five year course instead of four. They have made the educational requirements in literature, science and the arts, in the entrance examination very much higher than formerly, which is favorable to a broader culture.

But I observe that the curriculum in many of our leading medical institutions has been so loaded that the course seems to be more adapted to the post-graduate than to the under-graduate student. For instance, let me call your attention to a list of studies added to the seven fundamental branches, Ophthalmology, Dermatology, Orthopedic Surgery, Genito-Urinary Surgery, Otology, Laryngology, Medical Jurisprudence, Applied Anatomy, Hygiene, Bacteriology, Medical Chemistry and Toxicology.

In my comparisons as to the development of our medical schools, I have selected Jefferson, Harvard, Bowdoin, Ann Arbor and The Northwestern University. In a correspondence with the Dean of Jefferson Medical College he says: "It is not possible to give you a roster of lectures given in the year 1850. It may meet all your requirements to tell you that at that time there were seven professors and seven chairs." It is interesting to note the names of the men who filled the chairs at that day. Such men as Dunglison, Houston, Pancoast, Mitchell, Mutter and Meigs. Jefferson College now has twenty-two professors and twenty-two chairs, four associate professors, four assistant professors and seventy-nine associate lecturers, demonstrators and instructors, making a total of one hundred and twenty-one instructors.

Harvard, in the year 1850 had seven professors and seven chairs. The increase of Harvard instructors is about the same as Jefferson. Bowdoin had in the year 1853, as shown by its catalogue, seven chairs filled by three professors and three lecturers. Today, Bowdoin, one of the best small medical schools in the United States has increased its number of professors to fifteen, and its assistants to twenty-six, making in all a total of forty-one.

Ann Arbor and the Northwestern Medical College have increased their faculty is about the same ratio as have the eastern schools.

The point I desire to bring out in the development of our medical schools is, that they have developed in advance of the average student's ability to profit by; and I am assuming that the average intellectual ability of the young men today, other things being equal is about the same as it was fifty years ago; that the course of study is faculty in that it offers a wide range of study before a proper foundation is laid. (Query) How can a man be a safe and capable surgeon, without being a good anatomist? How can a doctor be a safe and wise practitioner without a good knowledge of physiology,

materia medica, and applied therapeutics? Is it not true that our colleges, in rearing a superstructure are neglecting to a certain extent the foundation on which the superstructure must rest? This foundation is as important as the keystone of the arch.

Before we go further, it is necessary to have a clear conception of the true function of a medical school. As I understand, they are primarily designed to make general practitioners. Quite frequently we see editorials or journalistic laments on the passing of the general practitioner—his place and work to be taken up by the specialist. There are really no grounds for such fears. Almost all of the profession in our country are general practitioners and will remain so, until this country becomes more densely populated, for the specialist can only thrive in cities. It then follows that the instruction in our colleges should be directed along the line of equipping its students for the work of the general practitioner; and that the specialties beyond those parts of them essential to the all around doctor should be strictly relegated to the post-graduate course.

I concede that it is important to have the specialties taught by experts, but they should not be allowed to infringe upon the time of the student to the crowding out of the fundamental branches.

The student comes to the medical school to acquire knowledge in his professional work and should have all the assistance of every kind that will expedite his progress.

Dr. Frederick Gerrish, Professor in Surgery in Bowdoin College and Surgeon to the Maine State Hospital, also a classmate of mine in former years, cites the following example of the poor relationship existing between teacher and pupil in one of our modern schools and which too often is found in other large institutions. A visitor to one of our noted schools was inspecting the anatomical department. Finding that there were not only no lectures, but also no recitations or quizzes in gross anatomy, he asked the professor, "How do you know that these men are getting their anatomy?" This was the reply. "How do I know? What do I care? That's their business." This type of indifference is unfair to the student who has paid his tuition.

From my observations, I do not believe the average student of today, is as good in anatomy, physiology and materia-medica, as the student of forty years ago. This is due, I believe, to the overloading of the curriculum. An instructor in a leading medical school, says that most of our text books are monstrously over-grown and that only a part of their contents are important medically. Prof. Gerrish holds that "A well proportioned and reasonable curriculum that meets the needs of the young practitioner, would be better than our present method of instruction in our medical schools.

The present process of instruction smacks of cramming which

is often mistaken for education. Only that food is valuable in nutrition, which is digested, absorbed and assimilated.

Having dared to criticize the medical schools, I turn with temerity to the great body of brother practitioners, and endeavor to tell wherein I think, we have lowered our standards.

It is a high estate to be privileged to spend a life time in the practice of medicine. The American Medical Journal of August, says, "It is possible as a sequence of recent discoveries in Egyptian history to trace the medical profession with its members occupying places of honor and confidence among men for more than six thousand years, and it is for us not only to hold that honored position but with increased facilities of research and investigation to build more enduring monuments upon the foundation."

Some of the branches of the healing art, such as surgery, pathology, bacteriology have made great strides in the past fifty years. In abdominal surgery I remember while attending school at Harvard University, that Humphrey D. Storer, won national reputation by performing the operation of hysterectomy, the second operation of its kind performed in this country. The operation is now performed in nearly every County hospital throughout the country. The reputation that the American surgeon has made in the past two decades has placed him in the front rank with the world's great operators; the general practitioner has not kept pace with the record of the surgeon. One might say that the field of medicine does not offer the brilliant opportunities as does the field of surgery. Medicine, if not as brilliant, offers quite as wide a field for study and progress as does surgery.

There are a few mistakes being made today by the general practitioner, which I believe are responsible for the slow progress and lower standards. One is that we have largely abandoned the study of materia medica and applied therapeutics using in the place of the standard drugs, manufacturers specialties reputed to possess certain therapeutic values. After making a careful inquiry as to the per cent of standard drugs used by the dispensing physicians in their practice, the commercial representatives of a number of our leading drug houses, give, as an estimate, as shown by the physicians orders that not over ten to fifteen per cent are standard drugs, recognized by the United States Dispensatory; fully eighty-five percent are proprietary preparations.

I received a short statement from David E. Hadden, B. S. President of the State Pharmacy Commission, a few days ago, in regard to this matter. He says, "I have been thinking over the questions you asked me and have been making some inquiries. From what information I secured I think not to exceed fifteen per cent of the standard drugs of the United States Dispensatory and National

Formulary are used by the physicians now. Fully eighty-five per cent of the drugs which are used by physicians who dispense their own medicines are what may be termed proprietaries. The dispensing doctor usually buys the line of specialties which is recommended to him by the pharmaceutical makers and they usually recommend their most profitable items and not always their most trustworthy products. When a doctor does write a prescription, he invariably wants the standard drugs."

I believe the change made by physicians from the use of standard drugs to the use of proprietary articles has been brought about in part, by the pernicious habit of physicians dispensing their own medicines, and in so doing they have for convenience sake used proprietary articles, many of them unknown to the pharmacopeia and of unknown strength.

The label says they possess certain therapeutic values and are good for certain diseases and can be given in stated doses. Such preparations furnished in a convenient manner, saves the doctor much time and study. Note the fact that the physician who writes a prescription uses standard drugs; while the physician who dispenses uses largely proprietary preparations. This habit, is not ethical, and makes the physician a routinist given to substitution, for if he has not what he wants, he uses what he has and his knowledge of applied therapeutics becomes narrower and more limited each year. The development of the dispensing physician along the line of scientific prescribing is retarded, and instead of the practitioner becoming wiser with a wider range of remedial agents, he becomes less conversant with the standard drugs.

Again quoting David Hadden, "That if the present custom of physicians dispensing and using proprietary medicines and specialties continues as extensively as at present, in ten years scientific prescribing will be one of the lost arts."

In conversation with a senior student from one of our prominent medical schools he told me his work in the hospital and laboratories was very confining. Upon further questioning he said there was not nearly as much attention paid to the study of materia medica as formerly. His professor told him that there was only fifteen or twenty drugs that it was necessary to be proficient in, when he graduated; that physicians were not depending now, as much as formerly upon drugs. He omitted to tell him that it was absolutely necessary later on to be familiar with a wide range of remedial agents, with which to serve in the intelligent administration of applied therapeutics.

Another tendency in medicine is along the line of commercialism, on this Prof. Prechett says, "We should never allow ourselves to be influenced by the commercial argument for the practice of medicine

is a profession not a business. If he is seeking a business that will bring him money he should look elsewhere." The physician, whether he has a large practice or a small one must give out more than he receives; not necessarily in money, but in effort, sympathy and sacrifice. He should hold a position similar to the physician of an earlier day; helping to shape public sentiment on all moral reforms, and in questions pertaining to the betterment of the masses.

The young physician of today is too often found engrossed in the tennis court, or at the whist table or other social pleasures which deprive him of the serious air and manner of the physician who was a builder and molder in other days.

The spirit of helpfulness seems to have passed in a measure and in its place is the spirit of selfishness. Too often is heard the question in many of our charity cases, "How can I secure my bill?" And, if no way be found, the overseer of the poor is usually called upon to secure the payment. This custom has a far reaching effect upon our professional influence and should be guarded against.

In concluding, I wish to pay tribute to the type of medical men known as the doctors of the old school. The profession owes much to them and in many things could wisely copy them. They were to be found on advance lines and recognized as confidential councils in nation, state and families.

It is for us to continue the work these doctors of the old school have given to us. Happy are we if we give the work to others as honored and respected as it was given to us!

HYDROTHERAPY AS AN ADJUNCT TO THE MEDICAL TREATMENT OF MENTAL AND NERVOUS DISEASES.*

C. F. APPLGATE, M. D. Superintendent, Mt. Pleasant State Hospital, Mt. Pleasant, Iowa.

I believe we all know that the use of water in the treatment of disease is as old as the practice of medicine. Some physicians have been successful in its use and highly recommend scientific hydrotherapy, while others denounce it as quackery. It has been said that every one who has endeavored to spread the teachings of hydrotherapy in this country has found considerable opposition—sometimes from those not familiar with the science of hydrotherapy—frequently from those who have never tried it in the treatment of their cases and usually from those with a decided lack of appreciation of any treatment aside from blue mass and quinine. The use of hydrotherapy in the treatment of diseases covers such a broad field that I shall only attempt to give you our experience in its use in the treatment of nervous and mental diseases.

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Section on Materia Medica and Therapeutics.

While we realize there is no such thing as an absolute panacea for human ills, my experience in the treatment of some of them leads me to believe that the proper internal and external application of water comes as near such a consummation as any single agent. When we study the physics of water we find it to be an extremely versatile element and that it owes its therapeutic values chiefly to the following properties: First, its remarkable power for absorbing and communicating heat: Second, its solvent nature since it is one of the universal solvents and third, the facility with which its physical state may be converted from a liquid to a solid, then again changed into a gaseous or vapor form. We know that water absorbs a greater amount of heat to a given weight than any other body and has from this fact been made the standard of specific heat, therefore we believe that water is specially adapted for making thermal applications of heat or cold to the human body by reason of the readiness with which it absorbs heat and the large amount of heat it has the capacity to store and communicate and no doubt the greater number of physiological effects we get are not due to the water per se, but to the impressions of heat or cold water when in direct contact with the skin.

The effects on the skin do not altogether depend upon the temperature and character of the application, but with equal importance upon the exact relation existing between the temperature of the application and that of the skin itself at the time of the application.

The temperature employed at large in hydrotherapy are practically within the limits of 32 and 140 degrees Fahrenheit. Those who have had experience in treating cases with hydrotherapy know that in some cases even the slightest variation in temperature and duration of bath produces entirely opposite results. It would be unusual for one experienced in this work to advise a hot bath given to a patient without specifying the temperature of the bath and duration. We know that a bath of 103 degrees Fahrenheit, lasting two or three minutes, scarcely elevates the temperature of the body. We know too, that such a short bath at that temperature is very refreshing and increases the muscular strength and endurance of the patient. If we now prolong this same hot bath to fifteen minutes it will produce weakness, tiredness and sleepiness. The body temperature will rise, the heart's action increase and muscular endurance will be reduced. The same rule holds good in regard to cold. We know a cold compress lasting two minutes has an exciting effect, while if long continued, gets warm and is soothing and pleasant. The temperature used depends upon the kind of bath and the condition of the patient under treatment. The kind of bath depends to some extent upon the kind of equipment in use for giving the bath.

Hydrotherapeutic treatments most frequently used among the

acute insane cases are the continuous flowing, neutral bath, electric light and sitz baths, hot and cold, dry and wet packs and various kinds of douches, spray and shower baths. Of the ten thousand or more treatments given in the hydrotherapeutic department of the Mt. Pleasant State Hospital during the past year, the continuous flowing bath, the electric light bath, the hot and cold packs and the needle spray have proven most effective.

From our experience with the hydrotherapeutic treatment of the insane we believe no hard or fast rules or routine in the treatment can be adopted, as each case is a case within itself. All cases must be studied and the bath prescribed, taking into consideration the nervous and mental state of the patient as well as his physical condition. In cases of nervous excitability and the acute delirious, maniacal patients the continuous flow bath has proven wonderfully effective. The continuous bath—by this I mean a bath tub so arranged that the water enters the tub at the sides and head and leaves the tub at the foot; the water enters continuously and the temperature is regulated by the thermostat which is readily adjusted by the operator so that any desired temperature may be obtained. The patient is suspended in the water by means of a cloth hammock or canvas cradle. The water is constantly changing because of the continuous flow and is in this way kept clean. The soothing effect of the water on the innumerable nerve endings allay irritation of the central nervous system, relieves congestion, pain and motor restlessness, lowers the heart's action and produces sleep through its hypnotic and sedative effect. To illustrate the effects of the continuous flow bath on the excited cases, I will give the history of one of the average cases so treated.

A woman nearing middle life with a hereditary history of insanity was committed to the Mt. Pleasant State Hospital after being treated in a private institution in a neighboring state until they could or would no longer keep her. She was a case of typical maniacal excitement, refused food, was noisy, destructive, restless and suffered with persistent insomnia. The usual hypnotics had little or no effect. She was placed in a continuous flow bath, the temperature of the water being about that of the body. Three hours after immersion she fell asleep and slept continuously for five hours. She then awakened, was moderately noisy, restless and sleepless during the night. The next morning she was again placed in the bath and kept there about four hours when she again seemed relieved of mental pain and motor excitement and slept a few hours; when it was decided to continue this treatment as often as necessary daily. At the expiration of sixteen days this patient was sleeping on an average of eight hours each night. Her periods of excitement had almost disappeared. She was taking sufficient food, had gained in

weight, seemed to realize her condition and was always ready for her bath. This treatment continued covering a period of five weeks. She was then allowed to take more exercise, was given a cold pack every other day, alternating with the electric light bath and needle spray to keep the skin and other organs active and some massage was given when she was inclined to become depressed. Improvement was rapid and she made a good recovery in a little less than four months from time of admission.

Unfortunately all cases so treated do not recover in so short a time if at all. Some require many months treatment because in many the disease has progressed further and some suffer from physical diseases which require special medical treatment. Some have improved even more rapidly than this case while we have had many non-recoverable cases improve under this treatment to such an extent as soon to become comfortable and be able to leave the hospital on parole.

I believe the baths next of importance to the continuous flow bath, in the treatment of these cases, are the electric light and needle spray baths. These should be considered together. The electric light bath is the most agreeable means of administering dry heat. Perspiration takes place at a lower temperature and in a shorter time than in the hot air or vapor cabinet. The radiations of energy from the electric lights passing through the air in the cabinet also pass through the skin. Some patients perspire freely in the electric light cabinet at a temperature as low as 120 degrees Fahrenheit. In giving the electric light bath the patient is placed in a nude state in the electric light cabinet which allows the head to project through the top, leaving the body exposed to a large number of incandescent lamps and reflectors. The lights are then gradually turned on, as many as seems advisable. In a short time the skin becomes red and profuse perspiration follows with general relaxation. The patient is then given the warm needle spray bath; this is followed by a moderate rubbing and an hour's rest. This form of bath is generally very pleasing and as a therapeutic agent is of great value.

I am convinced that the effects shown in the treatment of so many cases with this reflected light does more than produce excessive surface stimulation and elimination. There is a definite chemical effect which not only diverts blood to the surface, but changes the activities of the protoplasm and cells of the body.

There is in almost all cases a noticeable effect on the nervous system, evidenced by diminished irritation, restlessness, pain and discomfort. There is a physiological effect in lowering the tension of the arteries, slowing the heart's action and a marked relaxation and tendency to sleep. I have also noted in cases treated with the electric light bath the rapid absorption and pronounced action of drugs.

In cases where there is a toxemic condition the electric light bath has proven most effective in diminishing the toxins and eliminating them. The light itself in addition to producing warmth has a distinct remedial value in destroying germs, neutralizing toxic products, removing waste and causing mechanical surface congestion, but to get the best results, the electric light bath should be followed by the neutral needle spray bath and in the stronger cases by the alternate Scotch and Fan douches.

The temperature of the Fan douche ranges usually between 60 degrees and 80 degrees Fahrenheit, while the Scotch douche has a wider range of temperature. These douches as well as the pressure used, must be in accordance with the strength of the patient. I do not strongly recommend douches in the treatment of those afflicted with mental disease as this class of patients is usually very sensitive, nervous and some have a fear of cold water and it sometimes requires two or three treatments to assure them they are to experience no unpleasant sensations as a consequence.

One of the best and most easily applied forms of hydrotherapy is the pack. It is a physiological, therapeutic measure, much employed in general hospitals and can be used in any home. The kinds most extensively employed are the cold, wet sheet and dry, hot blanket packs. The technic of these packs may be summed up in saying, have the feet warm and keep the head cool and you can use either the cold, wet sheet, or the dry, hot blanket.

The reaction from the cold, wet sheet gives the best results in most cases. When first applied there is a slight shock and respiration is stimulated and the heart's action accelerated, but a reaction soon takes place at which time the cutaneous arterioles become filled with blood and the sensation of cold gives place to one of warmth, respiration becomes normal, the heart's action slowed, the brain becomes anemic, the congested nerve centers relieved, the skin relaxes and there is a complete muscular rest. The effects of the cold pack are sedative, eliminative, tonic and antipyretic. By the use of hydrotherapy the circulation of the blood is improved, elimination is promoted—metabolism is stimulated and the nutrition is heightened. When the treatment is administered daily, the congested kidneys, torpid liver and sluggish bowels are stimulated by the prompt circulatory reaction.

Hydrotherapy is specially indicated in cases of manic depressive insanity, initial stages of various forms of dementia praecox, Korsakow's Syndrome, fever psychosis and that large variety of maniacal and morbidly depressed cases nearing exhaustion from both mental and physical diseases. It may be used successfully in most all cases of mental and nervous disease except in those patients suffering from organic disease of the heart, atheroma of the arteries,

old age or in those suffering from extremely debilitating or wasting diseases.

I am convinced that if hydrotherapeutic treatment is properly administered, it will in most cases assist greatly in restoring the elimination functions of the skin, kidneys, bowels and lungs; it will relieve congestion in one part and stimulate the flow of blood to another part lacking the normal amount. It will stimulate the patient's appetite for food and drink. It will relieve internal congestion, congestion of the brain and cord and do it more readily than by the use of drugs; it will improve the functions of the skin, quicken the flow of blood and lymph and equalize the circulation. It will increase respiratory activity and tissue metabolism, remove the effects of fatigue from muscles and brain, vitalizes, harmonizes and strengthens the central nervous system. It favorably influences the process of heat production of the body, promotes elimination of waste material and encourages hepatic and renal activity. It improves digestion by promoting the secretions of digestive fluids and absorption of the products of digestion. It soothes the excited patient and stimulates the stupid one by its action indirectly upon the central nervous system.

In general diseases it is most useful in case of autointoxication by its action on the skin and kidneys, causing elimination of poisons from the system.

The use of hydrotherapy in connection with the medical treatment gives the acute mental and nervous cases the greatest chances for recovery.

Discussion.

Lena A. Beach, Cherokee: This paper has been an unusually interesting one to me, but I expect a good many of you who are not connected with hospitals have let a good deal of this go in at one ear and out of the other; you think you can't use this because you haven't a continuous bath. The continuous bath can be very easily fixed—continuous in the sense that you can use it for several hours in a private home, by having rods fixed around the edge of the tub as it turns back, and making canvas strips to go across in the tub and a canvas blanket to cover. This can be used not only in treating mental cases, but many other cases where your elimination is poor. The same is true of the packs. All that is necessary is three blankets a hot-water pack and an ice pack, and a sheet that can be wrung out of the temperature of water that you find advisable for your patient. I think half of the patients that come to us under the influence of morphine, with temperatures of 103 to 105 degrees, could have been brought in a great deal better condition had the local physician treated them with hydro-therapy; and it is a very easy method and much more beneficial to the patient than the use of drugs. We do not exclude the use of drugs entirely, but we find that we are able to exclude the use of a great many by the use of hydro-therapy.

I should like to ask the author of the paper which he finds the better in treating depressed cases, the packs or the continuous baths.

F. A. Ely, Des Moines: If it were not for the fact that I know Dr. Applegate knows the difference between Blue Ribbon and Bock beer. I would say he was boosting for the Anti-Saloon League. But I am glad the doctor brought this treatment out to-night. It is true, as has been said, many of you feel that in your private practice you can't carry out these measures. But a great many of those present are associated with

hospitals, and I wish to call attention to the fact that practically all the up-to-date hospitals are today installing hydro-therapy apparatus and that this line of treatment is being carried out; and I wish to say that in my own personal experience a therapeutic bath, properly administered at the right time and temperature, has often been more effective than forty grains of chloral in producing sleep.

D. W. Smouse, Des Moines: I have had a limited experience in the bath with this class of patients, but for two or three years I have used the hot pack with children almost entirely in place of the opiates or the bromides or chloral; and I have yet, I think, to see a single instance where the hot pack does not give more prompt relief. I am sure those of you who have not tried it will see a much greater effect upon the nervous system, and especially upon the fever cases, where you can always rely upon reducing the temperature.

Dr. Applegate: As I understood Dr. Beach's question, it was, do I prefer the pack or the continuous bath in depressed cases? That is a matter, I believe, to be decided in each case. As I said, each case is a case within itself. I think that will have to be determined in quite a good many cases by the physical condition of the case. Sometimes the depressed cases come to us with such a low vitality that possibly the pack would be better than the continuous bath. I think in case you want to warm the skin and moderately and generally improve the circulation, I would begin with the dry hot blanket packs, and then later on, as the patient increases in strength, resort to the continuous flow bath, particularly if they get restless and noisy and sleepless. If the depressed case is worrying and will not sleep after the use of a dry hot blanket pack, I would then institute other treatment, and first I believe I would use the continuous flow bath.

THE VALUE OF PSYCHOTHERAPY.*

E. E. HARRIS, M. D., Grinnell, Iowa.

One of the best definitions of Psychotherapy is written by Munsterberg, who describes it as "the practice of treating the sick by influencing the mental life. It stands by the side of psycho-therapy, which attempts to cure the sick by influencing the body, perhaps with drugs and medicines or with electricity or baths and diet."

It should be understood at the outset that psychotherapy is sharply to be separated from psychiatry, the treatment of mental diseases.

Psychotherapy is regarded by too many physicians as only a product of modern mysticism and do not give it a proper place in the recent efforts toward the scientific treatment of disease. The difficulty here lies in the fact that we have grown up with other methods of treatment by drugs and our years of service with these remedies has led to our neglect of proper elementary training in psychology and its application as a means of cure in diseased states.

Notwithstanding our ignorance and neglect this means of cure is by no means a modern fad and has been applied by the profession in the various forms of hypnotism and suggestion in the cure of disease for centuries past.

Just now there is much being published and said concerning

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Section on Internal Medicine.

the merits of psychotherapy in the popular magazines, the daily press and the club which is more or less scientific in its bearing but with such a lamentable presence of vague mysticism, and of so great an adulteration of certain religious ideas and "medical amateurishness" that the value of the discussion is extremely doubtful.

These religio-medical faith cures, which are numerous, should be replaced by well defined scientific principles of psychotherapy and the desultory and indefinite efforts of the profession in the application of suggestion and hypnotism be abandoned.

These means of cure should no longer be left in the hands of the fakir and charlatan whether this fake be under the guise of religion or some of the fake systems of healing.

So we must ask a place for this important arm of therapy along with drugs, surgery, massage, electricity and serums.

One of the most important of the recent applications of psychotherapy is in the diagnosis and treatment of hysteria. This most troublesome of nervous maladies has at last found a thoroughly scientific and effective system of treatment in the method devised by Sigmund Freud of Vienna.

The first and most important step is in the careful diagnosis of the case. The diagnosis rests upon the discovery of the symptom-complex by the means in some cases of psycho-analysis; by the word method or by hypnoidization. Much is said of the psychic trauma or obsession, the repression of these ideas or knowledge which the subject may have stored away among his forgotten memories.

A very thorough knowledge should be had of the psycho-physical situation in order that a proper treatment may be applied; in fact everything depends upon the sharpest possible mental analysis—and also a thorough examination of the whole nervous system. Another warning is due just here that we must not confuse pathology with theology if our conceptions of these principles are to remain clear.

Psycho-analysis as practiced by Jung and other consists in what is known as the association tests and has long been used and became of value when it was discovered that a lengthening of the time of response gave a clue to the patient's emotional past. He found that a lengthened interval in one or more reactions in a series of words indicates that the stimulus word has touched upon an emotional complex or a constellation of ideas which exists independently of volition and which is dominated by an emotion of some kind. The stimulus word shows where the emotional complex is lurking. It shows what the subject likes and what he dislikes; where he has suffered and what has pleased him; what he regards as friendly and what as hostile; what he fears and to what he is indifferent. These biographical data come to light without the patient's knowledge and

sometimes against his will, and furnish a rational basis for psychotherapy," which later may be treated by suggestion, explanation, persuasion, and regulation of environment influences.

There can now be no doubt about the value of the use of hypnoidization in the treatment of certain types of hysteria and neurasthenia. One of the simplest methods: "The patient is asked to close his eyes and keep quiet as possible, without, however, making any special effort to put himself in such a state. He is then asked to attend to some stimulus such as reading or singing (or to the monotonous beats of a metronome). When the reading is over, the patient with his eyes shut is asked to repeat it and tell what comes into his mind during the reading, or during the repetition, or immediately after it. Sometimes the patient is simply asked to tell the nature of ideas and images that have entered his mind. This should be carried out in a very quiet place, and the room, if possible, should be darkened so as not to disturb the patient and bring him out of the state in which he has been put.

As modifications of the same method, the patient is asked to fix his attention on some subject, while at the same time listening to the beats of a metronome; the patient's eyes are then closed. After sometime, when his respiration and pulse are found somewhat lowered, and he declares he thinks of nothing in particular, he is asked to concentrate his attention on a subject closely relating to the symptoms of the malady.

The patient again is instructed to keep very quiet, and is then required to look steadily into a glass of water on a white background with a light shining through the contents of the glass; a mechanism producing monotonous sound is set going, and after a time the patient is observed to have become unusually quiet, he is asked to tell what he thinks in regard to, a subject relating to his symptoms. In short the method of hypnoidization is not necessarily fixed, it admits of many modifications. It is highly pliable and can be adjusted to the type of case as well as adapted to the idiosyncrasies of the patient's individuality."

Freud does not overcome a symptom by suggestion but causes it, to disappear by removing the ultimate cause—his method is more interesting: "He found that large groups of mental disturbance result from psychic trauma, a disagreeable idea, which, inhabited in the mind becomes the source of mischief and produces phobias and obsessions and hysterical motions. The cure of the symptoms demands the recognition of this first mental accident, which may lie back for years and which may no longer be in the memory of the patient. As soon as this earlier experience is brought to consciousness again it needs only a natural discharge and a normal expression and the symptoms which brought it about will disappear.

So we find by this method that the case does not require nor does the author use suggestion, persuasion nor hypnotism; only the bringing again to the level of consciousness the forgotten memories and hypnotism is useful only as it may be made a subsidiary means for bringing about this state by re-enforcing the memory.

Now this represents only a part of Freud's discovery and by no means the more essential or important part.

This discoverer found that even though the hysterical disturbance may have started with an accidental traumatic impression, there still remained the un-explained theory of why this impression had such a strong effect.

The patient may have been beset by other impressions of equal strength and the emotions as deeply stirred without leaving any permanent ill effects, and he argued that there must be some other cause in the subject himself which makes the impression so injurious.

And just here we find the foundation for Freud's discovery which is of the utmost importance in clinical work.

He found that only those conditions became serious and produced changes which became starting points for hysterical symptoms which touch on repressed and artificially inhibited ideas of the sexual sphere.

By this discovery entirely new lines of research have been opened up more than this we are by this means offered a system of cure which not only removes symptoms, as by our methods of suggestion and persuasion and hypnotism but it really strikes at and destroys the disease itself.

It has the advantage over the so called cathartic method, which consists in bringing the repressed ideas or trauma to the level of consciousness thereby removing some symptoms but still the original hysteria remained; and should new accidents occur other attacks of the disease would be produced.

The necessary thing to be done in this condition is to get at and remove from the mind these primary strangulated affections and our cure is indeed accomplished.

Freud himself rarely employed hypnotism in re-awakening these forgotten experiences, however it may be employed as a shorter and more direct means of reaching these forgotten experiences.

He preferred, for the most part, to depend upon the imagination to bring up any chance material of associated ideas and then to study their connections and follow their leadings. This in brief is his psycho-analytic method.

Other methods are also useful; namely the association tests; again the lower layers are tapped by automatic writing; but the difficulty with these is that the chief problem still remains, which is to discover the repressed desires and to understand through them

the injurious effects of the accidental experiences. Thus the whole field of hysteria has come into new perspective through this pioneer work of Freud, Bleuler, Jung, Stekel, and in our own country Boris Sidis, Munsterberg, and Morton Prince.

So, in this field, what has been in hysteria and neurasthenia, in replacing the empirical methods of the past may lead on to greater achievements in this most difficult and much neglected field of practice.

Psychotherapy is ridiculed because it sometimes fails. Its advocates do not claim uniform success, but it must be remembered that there is not infallibility in any branch of therapeutic aid.

Discussion.

M. E. Witte, Clarinda: The paper we have just had the pleasure of listening to is one of exceeding interest to me personally, and I wish to congratulate Dr. Harris on his admirable presentation, more especially because it is a field in which there is at present a great deal of exploitation, more particularly by the psycho-analysis of Breuer, Freud and Jung, the trinity of the new school of psycho-analysis. I wish, however, to take up your attention a moment on a phase of psycho-therapy, not as it applies to the neuropath or the psychopath, to the hysterical or the neurasthenic, or to any of these others who are wrong nervously, but to the treatment of the person sick other than of nerves—the patient whom you meet in your every-day practice. The appearance of this paper on the program is a sign of good omen to me personally. It shows that the profession is waking up to the recognition of the dual character of man. Most of us have been looking upon man as a perambulating chemical laboratory, with some physics thrown in. But there is something more to him which I fear we have often neglected, and that is his mind—his mentality, his activity, as a feeling, thinking and willing being.

It may have been a matter of peculiar interest to you to watch the influence that one practitioner exerts over his patient, as compared with another quality gifted so far as professional acquirement and medical ability is concerned. In the one instance the patient under similar conditions goes on to recovery, and in the other instance, practically the same with the exception of the practitioner's personality, the case is turned over to the undertaker. Now, there has been something in the one man's case, brought to the patient's aid, which was obviously lacking in the other. It is a phase of treatment that the quack, the charlatan, the irregular practitioner, Mother Eddy and all her ilk, have taken advantage of, in enlisting the favoring emotions in their patients towards expectant recovery. I very much regret that time and the occasion prohibit a closer discussion of the psychology of the basic emotions. Yesterday we had a paper in which a painful emotion was referred to, and I may say that Dr. Leipziger anticipated me in drawing attention to a part of psycho-therapy which I particularly wish to emphasize, and which it was my intention to bring before you; that is, by means of suggestion—not actually by fraud or by anything theatrical or involving the methods of the quack, but in a legitimate, honest and honorable way to enlist whatever hope there may be in the patient. I would suggest that the practitioner in the treatment of his patient should not allow his own face to display all the perplexities, anxieties and uncertainties, and whatever else may reveal doubt and indecision on his part. If you have fear and apprehension, for heaven's sake carry it out somewhere else where nobody can watch you, but have a clear and hopeful countenance in the presence of your patient; for anything that is displayed adversely to him is at once taken up, whether it is in your facial expression or in your manner. This part of psycho-therapy all of us can practice and profitably pay attention to.

I would like to say just a few words as to the new school. I live very close to Missouri. I have investigated the teachings of the school of Jung and Freud, and must confess that I occupy somewhat the attitude of that first great Missourian, St. Thomas. I want to see more evidence; I want

to be shown. There is unquestionably a very considerable element of truth in this new theory. They say truth dwells at the bottom of a well, but this particular well contains a great deal of turbid water. I don't for a moment want to minimize the importance of the psychic and the mental life of the individual which depends upon the sexual sense, remembering full well that there are only two great fundamental trends which make up the mental life of the individual. One is toward the perpetuation of the race, and the other is for the welfare of the individual. Our primary, fundamental and basic life depends on these. But in the theory of psycho-analysis as taught in the school of Freud and Jung there are so many assumptions, so many incongruities, so many sources of error which must be cleared away. We must remember that this school has been particularly working with hysteria and neurasthenia, where suggestion plays an important role; where there is an inmate toward dramatization. The technique of psycho-analysis is very suggestive to these hyper-sensitive people so as to bring about these romantic conflagrations concerning an injury received in the emotional sphere by some sexual lapse, which is usually referred to early childhood. I leave to you when the maturity of sexuality comes in. It does not come in in such young children. Of course I am aware that Jung and Freud—more particularly Freud—say that these people really suffer an injury, and insult to the sexual feeling at the time of adolescence, which was afterwards expressed at the time of puberty or later, but is referred back to childhood. It seems to me that this is not good science or good sense. It is in itself taking a great deal for granted and begging the question. The line of argumentation is one of drawing a general conclusion from particular instances—always a source of error and a fallacy. I would say that there is unquestionably something in it, but we should have more evidence before we accept the theory without a question.

E. A. Ely, Des Moines: I wish to call attention to the fact that although the new methods of psycho-analysis have done much to reveal underlying morbid ideas, nevertheless Freud has not yet enabled us to eliminate the cause, for there is something still farther back than the psychic traumatism.

Why is it that one individual is so susceptible to these sexual traumas, while another individual living right along beside him receives no impression at all? There is no question in my mind but that it is exceedingly valuable to us; it has helped us out tremendously in getting at the bottom of the disease and finding the basic ideas and I find that as a rule, if we can get at these, we usually have a handle with which we can control our hysterical patients. We have found in mental morbidity that the morbidity is usually exerted along the lines of the most intrinsic elements of life, and it is perfectly natural that the sexual life, being the intrinsic life of the individual, should exhibit marked perversions in morbid mentalities. We often find an excessive perversion of the religious side. Why is this? Because religion has caused the morbidity? No; because religion has been one of the prime factors in that life, either for or against and as a result of that, when morbidity takes place, religion is grappled upon. Just so it is with this matter of the sexual life. It is the fundamental principle of life, and as a result of that, when the mind goes wrong and we have morbidity in the form of hysteria or in the various forms of psychosis, then we have this sexual element predominating. We must prevent the chronic alcoholic marrying; we must prevent unfit people from marrying, before we are going to get at the bottom of this thing.

F. J. Murphy, M. D., Sioux City: According to Freud and followers, many patients have nervous attacks which are brought about by some painful memory in the subconscious mind. This memory, when called up by association, precipitates a state of mental agitation, according to the law that every emotion tends to externalize itself. Once the idea is uncovered, so to speak, and brought into the conscious life of the individual, it can be exercised. The painful idea, according to Freud, can be uncovered by the word "analysis sustem." Others again will resort to hypnosis to get the same result. This, however, is not the ordinary psycho-therapy that is of interest to most of us. It has long been known to the profession that every organic disease can be counterfeited, so to speak. In other words, derangement of function can be brought about without organic change, occurring in the organ so disturbed so far as we know. I think

we can charge the majority of the medical profession with being delinquent in the matter of distinguishing the so-called functional neuroses from organic disease. Most of these functional disorders are psychogenic in origin. That is, a general stimulus starting from the cortex is responsible for the disturbed functioning through disturbed innervation. In this way we account for gastric and other neuroses. Also, for a great variety of psychomotor neuroses, including hysterical convulsive spasms, tics, contractures, paralysis, etc. In most cases we recognize the inevitable law of heredity underlying the irrational mentality when dealing with disorders resulting from morbid ideation.

I hope I am not wholly pessimistic in this matter, but confess that I am inclined to view with contempt much of the treatment carried out, generally, in the management of this class of work. Much unnecessary operating, stomach washing and the like, is resorted to, without avail, in fact, with only baneful results, inasmuch as these procedures serve only to fix more firmly the obsessive tendency of mind. The psychotherapy is being discussed in both lay and medical articles to-day refers to the education of these irrational individuals. The mentality of such patients can be influenced favorably through suggestion, or better still through properly systematized educative procedures. The two differ in their *modus operandi* and in their results. If man is a reasoning, intelligent conscious being, then education is the only logical means to correct a perverted mentality.

The real test of the psycho-therapist is his ability to gauge the intellectual capacity of his patient and adapt his educative procedures accordingly. To succeed he must recognize that incapacity for normal ideation may be brought about in several ways. Organic disease of the brain or of the body may be responsible in some cases. In others a perverted education, or the lack of education may underlie the mental defect. Again, we have a large class to deal with, especially in women, who remain well balanced in a favorable environment, that is, when all goes well, but the mental irritation resulting from an environment which such individuals cannot adapt themselves to, may be sufficient to upset the mental equilibrium. Each one of these conditions must be met with in its own way.

These patients are numerous, and they are becoming more numerous every day, because the stress of life increases with civilization; and I believe that the American people are becoming the most nervous people in the world, judging from my own experience. As far as I am concerned, all there is to this matter of psycho-therapy with me is to be able to sit down and understand those people; to know that while those symptoms have no real basis, those patients are real sufferers. We would acquire the ability to feel for those who suffer. I believe a man's better nature will prompt him as to how he can take those patients as unfortunate individuals, and by encouragement and sympathy, by kindly conversation and instruction, develop in them a better moral philosophy of life, and in this way give those patients the strength to stand up. I say that while this thing is a big subject, there is nothing in it when you get right down to it but a mere matter of trying to develop good sense and develop the control of the consciousness in the individuals; of bringing them out where they can control their feelings and emotions and become reasonable and rational, and where the ideas that are born of the activity of their conscious mind control their acts, and not their feelings and impulses.

Time will not permit me to go into details of this, but it is a subject that I am glad to hear brought up, and if medical men will concern themselves in this side of this question, they will be doing something for themselves. We can't help ourselves without helping the other fellow, and vice versa, and the reason the profession has not become interested is because they have become mechanics. What a man thinks and how he lives they don't see, but that is the one position in which we can approach the practice of medicine. But the study of this matter involves philosophic reflection, and I think that sort of thing does not appeal to all physicians.

Pauline Townsend-Hanson: I was unfortunate in not hearing the paper, but I am so intensely interested in psycho-therapy that I wish to speak of it. The preceding speaker made a remark that made it permissible. In psycho-therapy we have no business to overlook the fact that in hard times there is a great deal more sickness than in good commercial

times. The psycho-therapy is that when people are worried they are more depressed and there is much more illness. The psycho-treatment in regard to it is for civilization to take away the uncertainties of business life and make a man's job—his bread and butter—secure for himself and his family, and illness will decrease.

Dr. Harris: I came before this Society with considerable fear and trembling because of bringing up this rather unusual subject for discussion, and I was prepared to meet considerable opposition. But the friends who have discussed my paper have done it so much better than I could that I am not going to have anything more to say about the opposition to psycho-therapy.

I do want to say just one word, however: that I don't think there is a gentleman or lady present who is in the active practice of medicine but will, if he or she will take a little time and a little pains to look into the psycho side of the treatment of their patients, find themselves more than amply repaid, and will meet with successes entirely unexpected. During the past two years, since sitting under some of the lectures of Prof. Freud, I have been in a very feeble and a very limited way trying to make application of some of those teachings; and, to my own surprise, things that have looked entirely impossible in the way of treating certain mental conditions have been made easy. Often the whole load of sorrow and disappointment and all of the very troublesome conditions into which the emotions have come at times have rolled away and the patient has come into a new light and a new way of living. I want to commend to you from this time on a little bit closer analysis of this newer arm of therapy. I am sure it will be worth your while, and that the time is coming when all of us will have used very much to our credit this new arm of therapy, to our ultimate advantage.

TRACHOMATOUS ULCERS OF THE CORNEA.*

F. W. DEAN, M. D., Council Bluffs, Iowa.

At times during the progress of a case of trachoma we find occurring ulcerations of the cornea. It is these ulcers that I am calling Trachomatous Ulcers whether they are trachomatous themselves or merely a result of the process. During the active progress of the disease ulcerations are very common. Indeed it would not be far from the truth to say that they occur in all cases. There is a disease of the lids which is called trachoma in which we do not find ulcers of the cornea. The cornea and bulba conjunctiva appear normal but on everting the lids the mucous membrane is found to be studded with large tapioca-like bodies. Following the thorough expressing of these bodies the mucous membrane are so satisfactory that I cannot believe that we have had to do with a true trachomatous condition. The pannus which we find in trachoma is made up a new formed blood vessels which push themselves out over the surface of the cornea because of the ulceration which preceded them on their journey toward the pupil area. If an ulcer occurs out of reach of these protecting blood vessels it is apt to become infected and destroy the cornea to the extent that large leucomatous scars are left as permanent obstacles to vision. After operating upon the lid with a roller forcep supplemented by some compression forcep with which I can get into the corners better than with the rollers and I prefer the rol-

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Section on Ophthalmology, Otology, Laryngology and Rhinology.

lers to scarifications, cauterization, sandpapering, etc., I brush the lids with cotton on an applicator immersed in a solution of bichloride in glycerine twenty grains to one ounce and if there is a pannus or an ulcerated condition present, I allow the solution to flow over the cornea then wash out immediately and order cold applications. I have found this to clear up the ulcerations of the cornea and the pannas better than anything I have tried. Silver nitrate ranks second in my experience while the copper stick which acts nicely on the lids, in my hands seems rather to increase the tendency to ulcerations. After the reaction has subsided I have secured very good results by the use of a one per cent solution of bichloride in glycerine once a day. It is not necessary to wash out the eye after using a solution of this strength. When operating for trachoma, except in small children to whom I give a general anesthetic, I anesthetize the lids by injecting under the mucous membrane one-half of one per cent cocaine in a one to four thousand adrenalin solution. By this method an absolute anesthesia is secured. There is no bleeding of any consequence and there is not the danger of loosening the corneal epithelium that there is when a strong solution or the crystals of cocaine are rubbed into the mucous surface.

There is a corneal ulcer occurring most frequently in middle life and old age to which the works upon ophthalmology do not give the space they deserve. I refer to those marginal ulcers of the cornea which make their appearance as a number of pin-point ulcerations and which if neglected and indeed often in spite of treatment coalesce forming a ring ulcer which threatens the cornea by cutting off its nutrition. My experience has been that when these ulcers are found on the cornea the lids show the results of a trachomatous process and I believe that trachoma still exists in these cases and is the cause of this form of ulceration. The treatment should be the actual cautery applied to each ulceration and to guard against the appearance of new ulcers there should be vigorous treatment of the lids to rid them of their trachomatous condition.

A chronic dacriocystitis is often found associated with old trachomatous inflammations of the lids and adds greatly to the danger from the marginal ulcers. The secretion pressed out into the eye many times a day is loaded with germs which infect the ulcers as soon as they appear and reinfect them after they have been cauterized. The virulence of the infection is often such that the eye is lost in spite of ones best efforts.

If there is a dacriocystitis coexistent with the marginal ulcers even if the inflammation is slight and the secretion is not excessive in addition to the cauterization of the ulcers and the treatment of the lids the lacrymal sac should be dissected out. I would go further and say that because the marginal ulcer is so frequently found

associated with old trachomatous conditions, we should on finding an old case of trachoma plus a dacriocystitis not only treat the trachomatous lids but also extirpate the sac.

Discussion.

Dr. Harkness, Davenport: I use the caustic stick for corneal ulcers. I also use the silver nitrate with very good results. A very good thing to use is a 10 per cent glycerine of copper, taking one drop to 20 of water, making a fresh solution daily and dropping into the eye. I use this not during the active state of the ulcer but before the ulcer is healed entirely and when the stage of pannus diminishes.

Dr. Wood: Regarding results of cases of corneal ulcers, let us put in the medicine that will give us the best result.

I want to report a case of some four months ago. I treated it in the regular manner for some time but it seemed to spread and I got no relief and no change of condition. I finally directed my attention to the nasal passage and found the middle turbinate enlarged swollen and the inferior also. I directed my attention to their treatment and found the ulcer improved rapidly. In this case the condition of the nasal passage was in a way responsible for the slow healing of the ulcer.

Dr. F. E. V. Shore, Des Moines: I think this question of corneal ulcers is too important to let go. Those of you who have had a large number of trachomatous ulcers will not be surprised to find how rebellious these cases are to get well. I recently had a case where the trachomatous ulcer progressed although I was very careful. I employed various things used in the treatment of ulcers. I used the bichloride solution thinking that it might help but it was absolutely of no service, and then the caustic stick. Although the caustic stick is somewhat in disuse, it is one of our safest remedies in most cases of trachomatous ulcers. This particular case improved immediately.

Dr. L. W. Dean, Iowa City: I would like to ask if any used the Cooth Hyseoth Excision of Tarsus for ulcers. I have, however done the Cooth on three of my cases. I used the treatment described by Dr. Dean without much result, and the other gave the very nicest result.

Dr. Gratiot, Dubuque: I have not had experience with the Cooth operation for ulcers of the cornea. During the process of the ulcers I use bichloride, also the caustic stick. I think if these cases are managed well they are usually successful.

Dr. Amos, Des Moines: I agree with Dr. Gratiot's remarks. I think that more detail in handling these cases will bear good fruit. I am directing my attention to a matter not long since mentioned by Dr. Werts, in some of our trachomatous cases, which seems very slight, yet seems to be very important, that is the condition of the margin of the lid cells. Among the row of lashes will be found numerous dead lashes. After these are removed the patient immediately feels relieved. In cases of distichiasis I direct my attention to the margin of the lids in an endeavor to find diseased lashes. When these cases are put in the hospital for treatment, they should be put under the care of a nurse specially trained in the eye work. The average nurse knows very little about this field of work. My cases usually get along very well with the treatment of nitrate of silver.

Dr. Murphy: I think it important a good many times to pay a good deal of attention to the cilia in any disease of the eye lids or the eye. The patient will experience great relief, as Dr. Amos says, when these diseased hairs are pulled out. It is surprising how much they irritate the eye. The lid does not seem rough on the inside.

In my experience with ulcers of the cornea, direct my attention to the condition of the nose spraying and keeping it clean. I have the patient drop atropin in the eye once a day.

OBSTETRICAL HYGIENE.*

C. W. BAKER, M. D., Stanwood, Iowa.

My subject should include much more than incidents of the lying-in period, hence I have endeavored to interject some of the more important features of not only the matured, but also the maturing mother and her needs as such.

Every mother is entitled to a good physical heritage, even from as far back as her grand sires and dames. She does not always come into her own, however. No matter how pure the blood was two or three generations past, many intermediary influences have arisen to vitiate her rights. She most of all is the victim of circumstances. Her mode of living has been changed. She lives on easier terms with her surroundings than did her ancestors; she is coddled in hot houses, and worse still is the prey of fashion. She is bound in narrow limits by proprieties. Her nourishment becomes less wholesome and more irregularly taken. Instead of the romping pastimes of her mothers, she is put in a straight jacket, and sent to school where she is confined by rigid rule to the cultivation of her mind, and the destruction of her health, in many instances, with very little relaxation. If she be precocious, her danger is the more imminent, in that she is lead on, to the verge of a nervous collapse, before she is past the tender years of childhood.

We can hardly consider the mother and her needs without making our estimates on a biological and anthropological basis. Hall in his popular work on adolescence says, "Modern knowledge of woman represents her as having characteristics differing from man in every organ and tissue; as conservative in body and mind, fulfilling the function of seeing to it, that no acquired good be lost to mankind; as anabolic rather than katabolic, or disposed to assimilate on a higher plane; as normally representing childhood and youth in the full meridian of its glory, in all her dimensions and nature; so that she is at the top of the human curve, from which the higher superman of the future is to evolve, while man is phylogenetically, by comparison, a trifle senile if not decadent. She is by nature more typical and a better representative of the race, and less prone to specialization. She works by intuition and feeling; fear, anger, pity, love, and most of the emotions have a wider range and greater intensity. If she abandons her natural naiveté and takes up the burden of guiding and accounting for her life by consciousness, she is likely to lose more than she gains, according to the old saw that "He who deliberates is lost". Secondary, tertiary, and quaternary sex qualities are developed, far beyond her ken, or that of science, in a way

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Obstetrics and Non-Surgical Gynecology.

that the latter is only beginning to obtain a glimpse. Biological psychology already dreams of a new philosophy of sex, which places the wife and mother at the heart of a new world, and makes her the object of a new religion, and almost of a new worship, that will give her a reverent exemption from sex competition, and reconsecrate her to the higher responsibilities of the human race, into the past and future of which the roots of her being penetrate, where the blind worship of mere mental illumination has no place, and where her real superiority to man, will have free course and be glorified."

Amongst other interesting weights and measures, her relative brain weight to that of man is about nine to ten, which makes it actually heavier; the lower centers are found more highly developed than in man, and the gray matter is somewhat less in woman. Mental stimulus more readily lowers nutrition in woman, hence she is more prone to insanity.

Very much valuable literature has been produced in proof of the fallacy of over-educating the woman, not that it would detract in any sense, from that which would add to comfort and well being, but to re-enforce a naturally strong but extremely sensitive physical body. Such men as Oliver Wendall Holmes, Cyrus Edson, Nathan Allan, S. Weir Mitchell, Byford, Stover, Clarke, F. C. Taylor, Clouston, Playfair, with more than a score of others have written intelligently on this subject.

If our nation is to be strong, then the animal basis should be strong. If the woman degenerates in any sense, then there is a consequent pollution of this life stream. To keep this strong, consensus of opinion is, that it must be accomplished in the natural way, through strength in the mother, who stands nearest to nature. If the requirements of society, of creed, of occupation, of inclination, or education add weight in opposition to the perpetuation of this strength, it should be eliminated. Much that makes for physical deterioration in woman comes to us through our present civilization, and warped psychology; indoor habitues, society enthusiasts, hard labor and little nourishment, and last but not least of all, education, with its hard grind of mental work; which in time destroys that delicate poise of body and functions, so needed at life's fountain head, the woman.

Volumes have been written and spoken against the present so-called, intellectual discipline, which if experience stands for anything, the world has suffered more on account of her education than from any other cause, in lowering the plane of health, like every other good thing, it endeavors to over-reach and stimulate energies sacred only to the purposes for which the Creator made them. To these energies, a high mental tension, extended over exhaustive periods has proven most disastrous so that by the time the woman quits

the school, she has been so depleted in functions, and strength, as to relatively unsex her as a mother of her generation. She may be a good grammarian, but there her service ends. The first comprehensive statistics on this point was compiled in 1882, an important feature in one instance of which was that out of seven hundred and five college women under observation, only one hundred and sixty-nine never had menstrual irregularity, this however is only a single table made amongst many. Dr. Wilson in "Menstrual disorders of school girls", cites the fact that dysmenorhea and menorrhagia are very common. He urges more attention to physical development before puberty, which gives a formative influence over the sex functions. Constipation, headache, sallowness, acne, leucorrhœa, insomnia, perverted appetite, dyspepsia, over-tension of the nerves, teaism, coffeeism, cold feet, emotional strain and eye strain, he finds amazingly frequent in the schools. He suspects the American girl has more or less inherited tendencies toward functional disorders. In order to overcome this weakness, an appropriate set of hygienic measures should be inaugurated that would lead back to vigorous and healthy womanhood. To do this we should begin at the commencement of life. We seem to think, however—that after the girl has passed her teething age, she can easily vegetate up to the period of puberty. While doing this, we are overlooking one of the most important periods of life. To crowd the delicate nervous tissue of the little girl, means to detract from vital forces elsewhere. She becomes nervous, and a sense of overstrain is present, as time wears on she shows irregularity of common functions which chronicity renders difficult of management. She comes to puberty, unprepared, unresisting and crippled. At this time she begins to use her full resource in coping with the more or less rigid discipline in her school work, where her nervous energies require her full vital power, to meet requirements. Nature is kind to her but cannot in many instances meet her needs, and she is compelled to expend freely of her most important energies, to meet her unimportant ones.

The simple hygiene I would apply to this question and one which has been under my observation for the last twenty-five years is, to advocate a not too early entering of children at school, for it is at this period that the mischief to health is wrought, more than at a later time in a life. My personal opinion is that all children would be better physically if not sent to school until eight years of age and I would make the entrance of girls at least two years later than for boys. Even the present complicated state of kindergartening is subjected to criticism, as being inadequate and confusing, beside the continuation of nervous tension over hours of confinement, when the young growing child should be romping at play. After body growth is fully matured, she is not in so great danger of physical strain if entered on life right.

Hygienic Obstetric Technique should resolve itself into a thorough Aseptic Surgical Technique. Though many women are able to brave conditions astonishingly unsanitary, I am convinced that resistance in the human system in woman, is not the same possessed by our grand dames; that woman's power to resist presenting evils has diminished, and we as obstetricians should be alive to the gradual change taking place. Our patients should be acquainted with the means of keeping the bodily functions at par, taking her full capacity of exercise and pleasure. If she be corpulent, she should adopt means for retarding further acquisitions of fat tissue; if she be of the opposite type, which more often means a nervous one, she would cultivate nourishing foods of the proteid and fat nature, taking little carbohydrates, especially sugars, discarding spirits, and relying on foods and mineral waters to overcome constipation. If deficient elimination of urea results, meats should be discontinued. Morning sickness can often be overcome in a cup of weak, hot salt water. All clothing should be worn loose and hung from the shoulders. General bathing should be resorted to often, but sitz baths should be avoided.

I have come of late years to insist on having a rigid examination and repeated urinalysis in the later months of pregnancy. In this way can be assure ourselves of lighter dangers presenting, and a lessened urea elimination, presence of albumen or poisonous wastes. Lactation may be retarded beyond the usual period, as though it was an intent to continue, which can easily be done, if necessary. When put to the breast the nurse should be instructed to keep up a regularity of say two to three hours in the day and about twice at night. Some healthy children will not nurse more than once at night. Strict sanitation should be enforced in all utensils used.

Sore nipples are common and need to be kept pure and free from infection. A borated glycerine compound and olive or cocoa oil, or borated water solution should be used often. Do not use astringents during the period, as you could choose no surer way of doing, what you would undo. A recent writer on Lactation has laid considerable stress on sexual excesses as a frequent cause of impoverished and scanty milk supply. My experience has taught me that this is so, and not only so in this but in the matter of the very frequent abortions and miscarriages of the present day. They can be placed at the door of the impoverished system, a product of a mis-conceived civilization, much of which can be made lighter by the interested and friendly instruction of the medical adviser. The public is usually receptive of any wisdom emanating from him, and he should be alive to the advantages of such a privilege, if he would round out his humanitarian work in life.

Discussion.

W. J. Egloff, Mason City: I haven't much to say, further than that I would like to call attention to the point that Dr. Baker made in his paper, and that is that obstetrical practice is surgical practice. If that is so, why not employ the same methods that you employ in performing any ordinary surgical operation? If I was called to amputate a limb, what would you say if I failed to clean up the part and remove all superfluous hair? I would certainly be negligent. Therefore I insist that the part should always be shaved, thoroughly prepared, and in addition the use of rubber gloves. I think in the great majority of all cases of sepsis following childbirth and infection is carried in, and probably the infection has been lurking in the pubic region, or in the fingernail of the obstetrician. Therefore I reiterate that obstetric practice is surgical practice, and in doing it we should put in force the ordinary surgical rules.

H. L. Spaulding, Ankeny: The doctor spoke of eight or ten years as the age at which children should begin their school life. I think most of the mothers are too anxious to get their children into school. They think the kindergarten is a nice place for the children to play and be out of the way. I hardly think, however, that the doctor would want us to keep our children at home until they are eight or ten years of age.

Dr. Baker: I would say that it has not been my uniform practice (probably I have been derelict in that) to carry my surgical technique so far as to shave in every instance the perineum. I have laid more stress upon the fact that the surgeon's hands are more likely to carry infection to his patient than any lurking disorder about the parts. However, I have enforced in every instance that it was possible for me, unless the case was very urgent, the matter of having my nurse or some one about my patient thoroughly prepare the patient with antiseptics.

In regard to the matter of keeping children at home until they are ten years of age, some of the children who have gained the best start in schools, and some who have done the best in life as mothers, have been children that I have had knowledge of for the last twenty-five and more years, and have graduated at the head of their classes, after being kept at home under light duties until they were ten years of age.. So that I don't see anything improper or impracticable about the matter of keeping children at home until they are past the early stages of life.

FRACTURES OF THE PATELLA, WITH REPORT OF OPERATIVE CASES.

A. P. DONOHOE, M. D., Davenport, Iowa.

The patella lies entirely in front of the femur, and has only to do with this bone. The posterior surface in contact with the femur is entirely articular, excepting at the lowest point, the apex; where ligamentum patella is attached. The whole anterior surface is blended with ligament and periostium. The bone moves up and down on femur between the two condyles. The nature of this motion is not simple, and a study of it explains why so many fractures occur here from muscular action, the most of any part of the body.

The motion up and down is not the gliding motion of a plain hollowed out surface. The under surface is divided by a vertical convex ridge, into an inner 2-5ths and an outer 3-5ths. The outer facet is subdivided into three facets, the upper one touching femur in extension, the middle in semiflexion, the lower one in complete flexion. Inside vertical ridge is inner facet, which touches outer condyle. When we have the limb semiflexed the middle facet touches the outer condyle. This is the position in which fractures occur by muscular violence. The patella is in the same position between tendon

of quadricips and ligament of the patella, during semiflexion, that a stick is between two hands while being cracked across the knee. The point of fracture is a little below the middle.

The patella serves a double purpose of protection to knee and increasing the leveradge of quadricips extensor over joint. It is in this latter function that it is broken.

Fractures by fall are rare, as the tuberosity of the tibia is the first part struck. Keene states that 80 per cent of fractures of patella occur by external violence, and that muscular fractures are not so common as previously taught. This seems to be the opinion of other modern writers. In a series of 38,627 fractures, 660 or 1.19 per cent are simple fractures of patella, and 7 or .19 per cent are compound fractures of patella. When we treat 50 fractured cases, one must be a fracture of patella.

Severino a Neapolitan surgeon, in 1598 performed the first open operation on a fractured patella, with the result that his patient died. Three hundred years later, Lord Lister, after the antiseptic technique which he had discovered, performed the same operation with the result that his patient lived. Since that time it has been a matter of improving on the operation.

The subcutaneous method by which a wire was passed up behind the patella and down in front of patella under skin, was a method to avoid opening knee. There were two main drawbacks to this operation. In the first place there was the danger of wire penetrating the synovial sack back of patella, and secondly the inter fragmentary fibro-periosteal tissues preventing bony union. This latter has been the greatest drawback to all non open methods and operations on fractured patellas. The periostium and fibrous tissues over bone, do not break exactly and evenly, but either above or below the fractured line, the ragged ends falling down between fractured halves. When bone is thus coapted, bony union is impossible.

The circumferential operation never succeeded for the above reason, and in addition the difficulty of passing wire around bone under skin. A recognized surgeon writing on the subject says "the circumferential loop operation has few followers, as has that method by which bony fragments are simply opposed, and the suturing confined to the peri-pateller tissues." He favors open operations, wiring bone first then suturing ligaments.

This brings us to the question of the hour; shall the bone be wired? Some surgeons maintain that it is necessary to wire bone first, then suture torn tissues, torn periostium and ligaments with some strong material as kangaroo tendon, or chromocized cat gut. That the wiring is not necessary is being shown of recent date. Of 9 operations performed for trouble and recurrence two were for removal of irritating wire. Peri-Patellar sutures without wire, and

with longer rest in bed is equivalent to wire suture and shorter rest in bed. If the operation is done with all the antiseptic precautions, the result should be good. An infection here means just as much, if not more then an infection in abdominal operations.

Of 24 cases operated on 65 per cent were perfect, as regards practical results. As to recurrence of fracture, another report gives 250 cases operated on; 30 recurred, and of these 11 were after open treatment, and 19 after non open treatment. Still another report gives 60 cases operated on by open method, with only one recurring fracture.

Absolute freedom of motion after operation is rare. There is usually some impediment in extension and flexion, Absolute deformities, as atrophy of quadriceps, union of upper fragments with femur, and absence of union, even fibrous union, are rare.

What incisions is used in operation makes little difference; the horseshoe, convexity upwar or downward, seems to be most popular. The transverse, the longitudinal, the crescentic, inward and outward, are little used. So in the matter of antiseptic solutions; whatever solution is used the last washing is with normal salt solution.

At 1 o'clock on the afternoon of May 25th. Mr. D. K. while playing baseball, was running from home to first base, with the intention and speed to make second, when all at once while turning at first base he suddenly fell and was unable to arise. He was carried to the house, and an examination of the patient at 2. P. M. revealed a patella broke apparently into two halves, and drawn apart wide enough to admit two fingers. The separation indicated much laceration of capsular ligaments. The separation and the swelling increased by 5 o'clock when operation was advised.

A horseshoe incision with convexity downward was made. Cutting under the fascia let out a large quantity of blood from surrounding tissues. Further examination of wound revealed patella fractured straight across as if sawed in two, and a laceration of the capsular ligaments to the extreme outer side of both condyles.

Fortunately the fracture was low enough that the synovial sack of joint was not broken into, and yet high enough to have a solid piece of bone without any fragments. The torn pieces of periostium and ligamentous tissues were cut away. The first sutures were then taken over middle of patella and was double interrupted gut. The first four or five sutures were alternated on either side, then were taken from the point of extreme laceration of capsule towards bone on either side. The two pieces of bone were tightly apposed. The limb was put up in a board splint, with a comfortable inclination at the knee, to bring the lower parts of fragments together, with sutures acting as a hinge.

The patient lay perfectly quiet in bed for three weeks. Temperature on entering hospital was 99.4 the highest temperature reached was 100.4 on the fourth day, pulse reached 90 on the same day.

At the end of three weeks limb was put in a plaster cast, with flap above and below, so massage could be applied twice daily.

At fourth week cast was abandoned, and two light pasteboard splints used. At this time patient walked about hospital.

At fifth week a flannel bandage was used. At sixth week patient was discharged. At this time patient walked without a limp He could bend knee to a point less than 90 degrees.

An examination of the limb just four weeks after operation revealed a perfect joint. There was no impediment to extreme flexion or extension.

Fort Dodge, Iowa, Dec. 20, 1911.

Dr. D. S. Fairchild, Clinton, Iowa.

Dear Doctor: The Secretary of the Webster County Medical Society has forwarded to you for publication a paper read by Dr. J. W. Kime of Fort Dodge, Iowa, before the Webster County Medical Society, relating to the division of fees, we would request you not to publish the same as there has been a vigorous protest entered against doing so by a majority of the medical profession of Fort Dodge; they have signed this statement: "We the undersigned members of the Webster County Medical Society consider the publication of anything relating to fees, division of fees or regarding the financial side of the profession an unwise policy and protest against any such publication by this society until endorsed by the State Society or the A. M. A."

Respectfully,

H. G. Ristine,
A. H. McCreight,
A. H. Kakeman,
C. O. Ehley,
W. E. Alton,
W. S. Wolverton,
G. B. Palmer,

R. Evans,
W. W. Bowen,
F. E. Seymour,
E. D. Russell,
C. H. Rose,
F. B. Olney,
W. F. Carver.

John B. Murphy, M D.—We find that certain medical men are better supported by the community than medical men have ever been in the history of the world, but the average medical man is not as well paid as he was twenty years ago and the earnings of a large group are less than the earnings of those belonging to organized labor. Especially noticeable is this when we compare the declining earnings of general and "contract" practitioners with the advancing earnings of artisans and the increase in the cost of living. Society cannot afford to support its physicians indecently. It demands of them a certain standard of living but does not pay them legitimately enough to maintain that standard. The results are manifold but they all amount to the same thing. Physicians therefore are forced to obtain, legally or otherwise, enough to bring them a living income. They cannot have money or leisure for study and books and the community receives poor and out-of-date service commensurate with its payment. They lose in moral stamina and become quacks, advertisers, commission men, fee dividers, professional witnesses, etc.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

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D. S. FAIRCHILD, M. D.....	Clinton
EDITOR	
C. A. BOICE, M. D.....	Washington
ASSOCIATE EDITOR	

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J. W. Kime on Division of Fees.

Dr. J. W. Kime of Fort Dodge sets forth his views on fee splitting in this number of the Journal with such a degree of brutal frankness as to excite a feeling of admiration. There can be no question as to the Doctor's position and he very plainly sets forth his code of ethics which is that of pure commercialism. It is very plainly stated that "Medicine is a business and must be considered along business lines." The loyalty of Dr. Kime to this contention will be abundantly shown in a circular letter sent out to some members of the profession, which we append. A little further along the author says "There is a great deal of sickly sentimentalism and cant and false pretense about the practice of medicine which has nothing to do with real work of the medical man. It is true that every Doctor responds with cheerfulness to those tragedies of life which we come in so frequent contact, but these are common acts of humanity to which all respond under like conditions and are not peculiar to our profession alone." Humanity then is only incidentally connected with the practice of medicine, the same as with selling of real estate, groceries, etc. Is this true? Dr. Kime states that he has "visited every county medical society in the state twice and many of them three times during the past three years" and this is the impression he gets of the profession of Iowa? Inferentially at least, we get the impression that there are some who do not agree with these views of the Doctor's in relation to the public, but we are frankly told they are canting hypocrites. We all agree that the family physician should receive fair compensation for his work and for the responsibility he assumes, but not in the way Dr. Kime puts it. "Just how much the surgeon receives and how much the family

physician, is a matter of no concern of the patient so long as the work costs him no more, whether the fee goes to one or to two men". It is a matter of concern to the patient where his money goes, and the laymen will never consent to the working of any plan which will place his health or his life at the mercy of a commercial combine. He will never agree to the proposition that his misfortunes are to be made matters of speculation and to be considered from the standpoint of how much can be made of him; he will never be convinced that the man who measures up his diseases from a business standpoint can be trusted. The public is already expressing itself on the matter of division of fees, and in the future will be more emphatic than in the past, and we may well be concerned as to the results.

Dr. Kime has expressed himself so clearly and emphatically that editorial comment seems unnecessary, but when it comes to the resolutions endorsing the paper, a greater difficulty arises. We are at loss what to say. We know so many of the members of Webster County Medical Society and have so high an opinion of their professional integrity that this comes as something of a shock to us. It seems like a reaching out in the dark to discover some means to relieve the attending physician in his distress. Is it true, that the family physician in Webster county is in such desperate straits, that patients must be exploited for his benefit? What will it lead to? Will it be by a resolution or By-Law of the county society or a mutual agreement on the part of the profession that the fee for the surgeon shall be \$100.00 and for the family physician \$50.00 or some ratio, or will the family physician ascertain who will bid the highest, or will the specialist who needs the patient bid up until he gets the work. We know of an arrangement in Clinton county by which a surgeon in Clinton and a family physician in De Witt worked together for two or three years in the most happy manner on a 40 per cent basis. Then a dark day came for the Clinton surgeon when a Cedar Rapids surgeon bid 60 per cent for this work and straightway the family physician established a new affiliation.

What would Dr. Kime do under similar circumstances. Lastly, what will the public do when they learn that there is an agreement on a percentage basis between the family physician and the specialist. We think it clear, that the family physician will be eliminated, when it comes to special things, and the patient make his own arrangements with the specialist. The special merits of the resolutions are that the lines are written so wide apart that one can read in between them whatever he desires to.

Since writing the above we have received a protest signed by fourteen physicians and surgeons of Webster county, which has given us a great deal of comfort and it confirms us in the belief that

after all the greater body of the profession is made of high minded men and that only here and there are physicians and surgeons to be found who are willing to sacrifice the higher ideals to commercialism.

Fort Dodge, Iowa, Dec. 10, 1911

Dear Doctor: We are making our work at Boulder Lodge one of co-operation with the medical profession throughout the state. We want every physician to have a personal interest in this work.

In pursuance of this policy we are assigning to the use of each member of any county medical society, free of expense to him, one share of stock in Boulder Lodge Sanatorium, which share bears dividends at such times as its holder has patients under care at the Sanatorium. We plan to associate one thousand of the physicians of the state with us in our work and we invite you to be one of this number.

These dividends are paid in recognition of the family physician's responsibility in the case while temporarily under our care.

Shares are in amounts of \$100 each and bear dividends at the rate of 50 per cent per annum, as indicated above.

Kindly advise if this meets with your approval.

With kind personal regards, I am, Sincerely yours,

J. W. KIME.

Fort Dodge, Iowa, Dec. 24, 1911.

Dr. D. S. Fairchild, Clinton, Iowa.

Dear Sir: I must say for my part that I am pleased with the stand you take as editor of our Journal in the matter of fee-splitting or fee-dividing or other underhanded means of getting business and the part of the profession who are engaged in this or these methods, we are lothe to believe, realize the natural tendencies with which these practices are fraught.

We who do not practice these methods are not ready to indiscriminately condemn nor impugn the motives of all those who take other views of this situation which has injected itself into our ranks the practice of which has only a tendency downward on the tobogan into the sea of commercial and disgraceful scramble for the dollar and ultimate destruction of the profession if carried to its logical outcome.

The custom of "drumming up" cases to be "brought in" "to a good man", etc., in consideration of a part of the fee is a vicious thing and should be frowned down by the entire profession.

While we do not say that it is done yet the temptation is there for the family physician to "work up cases" to be "taken in" to the surgeon and in order for Dr. Jones to convince "A" that he needs an operation he (the family physician) must needs make a diagnosis

of the surgical condition and often go through a very elaborate description, or just what Dr. "B" will do to him and just what Dr. "B" will charge him either telling Jones or leaving him to infer that the trip will be a gratuity on his part that it will be pleasure to go along and assist in the operation.

After duly deliberating, having made some investigations Mr. Fee Hunter determines to whom to "take" the patient so as to get the largest chunk of the fee; the trip is all planned and having arrived at the office of the surgeon or specialist with a readymade diagnosis and prospects of a fee unbeknown to the victim; imagine the predicament of the surgeon (Mr. Fee Splitter) who on an examination finds that not only is an operation not indicated but positively contra-indicated; he is plainly up against the proposition of turning the Dr. "J" down in his diagnosis, sending him home without a "fee", or doing some harmless (possibly) incision of the nature of which the patient is unaware, and said patient may be only worse for the void in his pocket-book; or perchance in the course of time the very operation for which he was originally "steered" becomes necessary and the patient falls into the hands of some other surgeon whom he, the patient, himself has chosen and the same operation has to be done and the same "tumor" removed as he paid for once before.

If men are so crazy to do "big" business as to lay themselves open to such situations is it any wonder that osteopaths and christian science and all other rubbish thrives on the gullibility of the laity?

Or if Dr. Fee Splitter had refused to operate as the dictations of his conscience would say or the best interest of the patient demanded he could make up his mind at once that that would be the last patient Dr. Fee Hunter would ever "bring in" to him and the results to the professional relations between Dr. Fee Splitter and Dr. Fee Hunter would be disastrous.

We do not wish to impugn the motives nor defame the character of all who are in this business of fee-dividing, as we are aware there are men who do these things who are able and conscientious in all matters, believing the practice is justifiable but the tendency is downward, the way too widely open for grafting and the logical outcome is a tendency to disintegration of the profession and it will weaken the confidence of the public in the profession as a body; why not all swear off and let things take the natural course and each one of us will retain his self-respect and then we will not degenerate into a mass of tangled arms and legs in a scramble for the dollar. W. F. Carver.

Testing the Viability of Strangulated Intestine.

Dr. S. C. Plummer of Chicago makes an observation in the *Journal Surgery, Gynecology, and Obstetrics* for June, 1911, which is in-

teresting and well worth remembering. A case of strangulated hernia came under his care. The viability of the intestine was questionable but it was desirable to replace it if this could be done safely. Normal salt compresses were applied for 15 minutes without material improvement to the intestine; the adjacent normal intestine was becoming darker. It occurred to Dr. Plummer that the traction he was making interfered with the circulation. He therefore replaced the intestine for 3 minutes, and on withdrawing it found a most striking change. The swelling had left the intestine, the color was normal and the furrows at the two constricted points could scarcely be seen. The suggestion is that after the strangulated intestine is released to replace it temporarily within the abdominal cavity for a few minutes in order to release the circulation from any embarrassment from traction on the intestine, which may be necessary, to bring it under the influence of the normal salt compresses.

Moszkowicz's Hyperemic Reaction in its Application to Amputations.

Dr. Rudolph Matas of New Orleans in an address before the Illinois Central Association of Railway Surgeons "Aids to Conservatism in Determining the Line of Amputation after Crushing and other Mutilating Injuries of the Limbs", applies the "hyperemia reaction" worked out by Moszkowicz of Vienna in 1907 to the determining of the point of conservative amputation of limbs in injuries demanding amputation. In cases of senile arterio-sclerotic, the rules governing amputation "was wholly empirical and very unsatisfactory. Opinions were divided between surgeons, who advised amputation above the knee and those who amputated below it. The variable results following either practice proved that no absolute rule was right." Moszkowicz test is as follows: "The affected gangrenous limb is elevated until gravity ischemia is obtained; the Es-march elastic bandage may be used to force the blood out of the limb; then a circular elastic constrictor is wound around the thigh as high as possible and allowed to remain in place at least five minutes. After the elastic bandage is removed, the characteristic waxy, yellowish-white cadaveric pallor will be obtained. When the constrictor is removed, the usual and well known hyperemic wave will promptly appear and begin its descent to the periphery. It will gradually spread over the limb, very quickly all over the thigh and knee where the circulation is active, but it will hesitate or stop altogether wherever the capillary circulation has ceased. Wherever the circulation is obstructed the blush will fail to appear. By waiting some time it will be noticed that wherever there is any capillary circulation, the original ischemia or cadaveric pallor will change to a living color; but in the dead areas no change of color will be noticed". "It is evident that any amputation within the pale of bloodless zone will end in sloughing of the flaps". In applying this test to acute trau-

matic cases, it is quite evident the "hyperemic reaction" will not be likely to give a fair estimate of the lowest level of the living or viable tissue until the patient has fully reacted from systemic and local shock, and until a blood pressure, fairly approximating the normal has been restored. The papers of Bergemann, of Mendelssohn, of Cardemal and of Matas, all of which apply to cases of senile gangrene, are confirmatory of Mozkowiez's observations.

The observations presented by Matas bear on the question of conservatism in amputations of limbs, affording a practical method of determining how much may be saved. Reclus in 1895 in a paper before the French Surgical Congress, proposed a plan the purpose of which was to avoid the sacrifice of valuable living parts. He prepared preservative mixtures which could be applied to the stump and the stump bandaged and wrapped in abundant dressings and allowed to remain in place three weeks if there was no persistent putrifaction or sign of infection. At the end of this time the sloughs are found to be either dead or completely detached from the living parts. "It is easy then to remove the sloughs with scissors, and to trim the stump in proper fashion without sacrificing important parts." The vital point in Reclus method is that we cannot always determine what parts are living and what are dead. If we can only keep the dead parts from infecting the living parts, we can safely wait for nature to map out her own line of amputation, etc."

Published in the Railway Surgical Journal, Dec., 1910. D. S. F.

Hospital Organization.

Prof. Henry A. Christian, Dean of Harvard University Medical School, delivered before the Maine Medical Association at Augusta, an extremely interesting address on "Modern Methods of Clinical Investigation in Relation to Hospital Organization", which we reproduce in part. We felt sure the address will be read with much profit by those interested in the betterment of our hospitals from every point of view. We are of the opinion that there are many physicians and surgeons, especially in our smaller cities, who are anxious to have our so-called hospitals transformed into real hospitals which would be capable of doing good work if they were properly organized. (Editor).

After reviewing the state of knowledge of heart and kidney disease up to the end of the first decade of the XIX century, Dr. Christian says:

"In this space of 80 years, two methods have yielded us the largest knowledge of disease, the statistical method of case study and the post-mortem examination of end processes. We have busily accumulated case records in our hospitals, and from them deduced the type picture and its variants for many diseases. A casuistic ac-

cumulation has instructed us in many and certain rare system complexes. Extensive and valuable indeed has been the contribution to knowledge from these methods, and no one would deny that in the future they will continue to add to our understanding of disease. Still it is very sure that their day of greatest productivity is past, and we must seek in newer methods of investigation to do for our generation what our forefathers did for theirs. Such methods are already being applied to the study of the two conditions we chose as illustrations, so let me review some of the work now being done on these subjects as examples of the newer methods”.

“In cardiac disease the clinician in addition to such data as he has obtained in the past by his senses, aided by simple mechanical devices, i. e. by inspection, palpation, auscultation and percussion, is seeking with complicated apparatus other facts in regard to heart function. The perfection of various mechanical devices for recording, has enabled him to inquire into the condition of different functions of cardiac musculature and into the relation of the various parts of the heart, each to the other, during the cardiac cycle, not alone contractility, but conductivity, irritability, rhythmicity, and tonicity of heart muscle are investigated in relation to cardiac activity.”

The polygraph and other apparatus of this type yield simultaneous tracings of cardiac, arterial and venous pulsations from which have come a greatly increased knowledge of cardiac arrhythmias, and a better functional conception of those very important cardiac conditions usually grouped together as cases of chronic myocarditis. These methods combined with minute study of cardiac architecture and experimental injury of definite portions of the heart muscle, have given us a conception of the conduction system of the heart, the anatomy of the so-called His bundles, and the effect of lesions located in this part of the heart structure. A thorough understanding of certain forms of bradycardia and heart block have resulted and some toxic actions of digitalis and other cardiac drugs can be better understood as the result of these investigations of the conduction system.”

“The perfection of a very delicate galvanometer, the string galvanometer of Einthoven, has put into the hands of the clinician a means of examining a hitherto uninvestigated part of the cardiac mechanism, the delicate change in electrical potential which accompanies muscle contraction. With a patient in the ward connected by wires with a laboratory, permanent record may be made of the waves of excitation that accompany contraction, and observations of variations in these as they occur under pathological conditions are giving us new information about cardiac function in health and disease.”

“The Roentgen Ray work and the orthodigraph have thrown

new light on the size and position of the heart in the thorax under varying conditions. Tonicity of heart muscle is seen to have an important part in cardiac function and diastole as well as systole comes to be of clinical interest."

"Experimentally in animals we are able by instrumental means to produce various valvular lesions and to investigate their effect on cardiac function. Experimentally with drugs we have followed the histogenesis of these conditions from period to period of the development."

"In a similar way new methods have been applied to the study of renal function. The natural disease in man has been investigated by elaborate chemical studies of food intake and urinary output. The effect of variations in foods have been followed in the urine composition. More intelligent finding of patients have resulted and therapeutics have been improved because of a better knowledge of drug action in man coming from such minute study of nephritic cases. Experimentally produced nephritis in animals has taught us much about renal functions."

"However it is needless to multiply examples, for already it is very evident that these newer methods of clinical investigation demand the skilled use of delicate and complicated apparatus, the ability to carry out elaborate clinical and physiological technical methods and the concentration of time in the very careful investigation of a few patients, rather than the cursory study of many. From these methods of clinical investigation have come newer methods for the clinical examination of patients which are constantly demanding of the physician better preliminary training and better medical instruction. The newer methods of clinical investigation thus have been factors in bringing about these changes in medical education which are sweeping over the country, and in which we all are keenly interested."

"What have been their effect on hospital organization? In considering hospital organization it is necessary to keep in mind the several types of hospitals and their functions. We must recognize that there are large hospitals and small hospitals, general hospitals, convalescent homes, and sanatoria general and special, partly or entirely public charity organizations. Then there are public, pay, or private hospitals, and proprietary hospitals in the sense that the latter are owned and managed by single physicians or small groups of physicians, all of this type intended as places for pay patients and expected to yield a profit or at least not be run at a financial loss. Then, of course, some hospitals represent a mixture of these several types."

"It is the general hospital managed as a public charity that I wish to consider in relation to its organization. What is the func-

tion of such a hospital? It is merely a place to furnish board, lodging and medical service to the deserving poor? That it has a function broader than this is now so generally conceded that I will not interpolate any arguments for this thesis, but assume that the function of a public charity hospital is partially remedial, partially educational; it treats the sick and it educates physicians, nurses, and medical students, and in doing both seeks to advance medical knowledge that succeeding generations may profit thereby."

"The very complexity of method used in modern medical investigation as already pointed out, demands a highly specialized training and continuity of observation for investigators, and in addition a large variety of apparatus and trained assistants if advance is to be made. The time element enters to make impossible the application of such methods to more than a relatively few patients to any one period. Consequently the trend of modern clinical investigation is more and more towards the most minute continuous study of a few patients rather than the cursory observation of the many. Team work and co-operative co-ordinated observation becomes increasingly important, and hence the necessity of a centralized staff organization. As a result of the influence of present methods of clinical investigation there has come the feeling that for the hospital in which medical investigation is to be conducted, a continuous service with a single head is a more advantageous unit of organization than the older method of broken service with three or four chiefs of co-ordinate rank on duty during the twelve months. If we examine critically the hospitals of the world with reference to their productivity in investigation, it seems quite certain that productivity is most marked in those who have used the continuous service plan. This plan has prevailed more generally in Germany than elsewhere, and I think all of you will concede that no country has equaled Germany in productivity in medical investigation during the past quarter century."

"But how about the patients you ask? Do they get better treatment in a teaching hospital with continuous service? What greater stimulus to do your best in diagnosis and treatment than the watchful eyes of a group of critical students? A Committee of the Overseers of Harvard University, in a recent report referring to a hospital for medical investigation state: 'In this hospital a perfect fidelity to the individual patient is found to be entirely consistent with the use of every case as material for assiduous and minute study. In other words, that hospital which is most wisely utilized for the continuous study of diseases and of the means of preventing and treating diseases should also be the hospital which is most successful in the treatment of the individual patient. Accordingly, hospitals are contributing more and more to medical teaching of the in-

dividual sort and are finding that this development tends to improve and animate their whole curative or remedial function. All medical and surgical research ordinarily needs the direction of a single mind, acting through a long period of time. This continuity is especially needed when some disease is to be studied through a series of individual cases under close observation in a hospital. The practice of shifting the visiting physicians and surgeons in a hospital once in three months or four months is detrimental to the desirable continuity of clinical observation. The arguments for continuous service, instead of divided, are very strong; first, that better service can be given to patients under this system; secondly, that the hospital can do better teaching, provided that the physician or surgeon who is giving continuous service is selected in conference between the trustees of the hospital and the authorities of a medical school; and thirdly, that with continuous service the hospital has a better chance of contributing, through its chief physician or surgeon, to the progress of medicine or surgery."

"I have not mentioned the training of nurses, in as much as it seems almost self evident that the form of organization which gives to the hospital the strongest possible staff and to the patients the best treatment, is the one which will yield the nurse the best possible training."

"In this form of hospital organization suitable for other than large general charity hospitals associated in medical teaching with medical schools? I think it is. Such hospitals have their teaching functions, though there may be no students of a medical school in attendance, and this function is favored by the system. Patients likewise are apt to be better cared for. If with the continuous service provision is made, and it should be, for the relatively early retirement of the chief-of-service, a powerful stimulus is given to the junior of the staff to do their best work, inasmuch as the position of chief-of-service goes not by seniority but to him who shows greatest capability, and it is a position, that of chief-of-service in any hospital in any community, well worth winning."

"That a continuous service in the hospital not connected with a medical school is the one likely to yield a maximum of hospital efficiency is well shown by the success of some private hospitals organized on this plan, and particularly as exemplified in the international reputation of the Clinic of the Mayos at Rochester, Minn."

"Personally I feel very strongly that the single headed continuous service is today the type of unit organization for hospitals, and when applied will greatly add to the efficiency of these hospitals. Hospital reorganization along these lines is taking place in many parts of the country, in my opinion, because the medicine we practice today is inherently different from that practiced by our fore-

fathers, and this difference in clinical investigation and in clinical practice renders such changes almost necessary if hospitals are to keep pace with medical advance."

Maine Medical Journal, Aug., 1911.

Dr. Joseph Oliver died at his home in Fairfield, Jan. 11, 1912. On Tuesday evening, January 9th, he suffered a stroke of apoplexy and was unconscious from that time until his death. He had suffered for more than three years past with Brights disease, but his death was a great shock to his family and friends. Joseph Warren Oliver was born on a farm in Washington county, Pa., January 4th, 1837, and he resided there until he reached young manhood. At the age of eighteen years he entered Washington and Jefferson College at Washington, Pa., and completed a three year course. While still a student he began the study of medicine. The beginning of the Civil war found him teaching school in his home county, but at Lincoln's call for volunteers he immediately closed his school and enlisted in Company C. Eighth Pa. Reserves and served one year. At the end of that time he re-enlisted in Co. K. Twenty-Second Pa. Cavalry and served three years more. He was mustered out of service in the spring of 1865 in Washington, D. C. In June, 1865, he was married to Miss Martha G. Towne and they went to Philadelphia, where Mr. Oliver entered the Philadelphia Medical College, obtaining his degree of Doctor of Medicine. On March 3, 1866, Dr. and Mrs. Oliver came to Jefferson county. Dr. Oliver practiced his profession until 1891 when failing health required him to quit active labor. He was a member of the Board of Pension Examiners in this district for thirty years and was one of the best known men in this county. Dr. Oliver was also a member of George Strong Post, G. A. R., of this city and always took a great interest in the meetings and business pertaining to the Post.

Medical Society Talks "Typhoid."

The first quarterly meeting of the Black Hawk County Medical society in the year 1912 was held Jan. 9th, in this city, Dr. Mullarkey presiding. The subject of typhoid fever was taken up for consideration. Dr. Lillie Arnett of Cedar Falls read a very interesting paper on the prevention and prophylaxis of typhoid fever and reported on several cases.

Dr. Mead also talked of the prophylaxis of the disease, emphasizing the necessity of unusual care to secure absolute cleanliness on the part of the nurse and members of the family in order that no recurrences develop. Dr. T. U. McManus of Waterloo led the discussion.

At the business session following the discussion of typhoid fever the following officers were elected for the ensuing year: President—Dr. J. E. O'Keefe of Waterloo; vice president—Dr. F. W. Mead of Cedar Falls; secretary—Dr. Carl Bickley, of Waterloo; Treasurer—Dr. C. A. Waterbury, of Waterloo; delegate—Dr. T. U. McManus of Waterloo.

Dr. Robert Nestor of Waterloo was elected a member of the board of censors to fill the vacancy made by the retirement of Dr. J. E. O'Keefe. The next meeting of the society will be held in April.

Dr. Williams, the efficient secretary of the Monroe County Society sent out to all the physicians in the county a letter and list of questions. We reproduce them herewith that others may take the hint and start something in counties where needed.

Hiteman, Ia., Jan. 16, 1912.

My Dear Fellow-member:- Our meetings of 1911 have become history. Only the good they've done remains with us.

Retrospection reminds me that many of those meetings were most excellent while others; well, the truth compels me to call them failures! Following this admission I have tried to solve the reason why ALL of our meetings were not as instructive, entertaining and fraternal as they should be. I can give many reasons, I fear, but, the remedial agent is much more difficult to obtain.

The fact is, a large per cent of you never attend one meeting from one New Year's to the other. This makes it impossible to reach you and, consequently, we can never receive your friendly assistance nor you, ours. Were I to have a bad case on my hands and I called on either of you for assistance there isn't one of you who would refuse to come immediately to my aid and, that too, when you knew there was no mercenary recompense. Now, that you might give us in your next paper may possibly be just the point that has baffled me for a long time and just one of the many little things necessary to know to make better and useful general practitioner, which he all aspire to be. On the other hand, things are just as likely to be reversed and you'd be the one gathering the manna. Moreover, should you not happen to get a new idea, repetition makes you KNOW the old.

I believe it sometimes happens that when one of you, perchance and by accident, really find yourselves attending our meetings you could offer many suggestions but owing to the fact that you are not attending much anyhow you'll,—just pass it up; kind 'o bashful like and it goes unsaid.

Now, I'm going to give you a chance and here it is. I am enclosing a stamped envelope and some questions. I want you to answer them honestly, fully and frankly. Say whatever you wish. Your name will be held strictly confidential if you wish, but I expect to use your answer at the next meeting. Be there. I want to hear what the other fellow says, too.

Very respectfully, yours,

T. J. WILLIAMS.

1. Do you approve and want to encourage the existence of our society.
2. Is it conducted according to your desires? If not, wherein is it not?
3. Do you wish the meetings held monthly, bi-monthly, or quarterly? Where?
4. Criticise the Secretary (give me sulphur if you wish. I'm used to it) or any of the officers.
5. Why do you not attend more of our meetings?
6. How many of the 1912 meetings will you give me your personal promise to attend?
7. Will you also give me your promise to appear on the program in your turn?
8. Should I have outside talent programmed will you make a SPECIAL effort to attend?
9. What practical advice can you offer for the bettering of our society?

The Muscatine County Society met in Muscatine on Friday, January 26, 1912. The following program was presented: Dr. B. E. Eversmeyer presented a paper on Croup, which was discussed by all members present.

The present law in regard to the three year training course for nurses, was discussed and the following resolutions adopted:

"Believing that more than two years' training course, in addition to two or three months' probation period, is neither necessary or practical for the making of a well qualified nurse, for several reasons, chief among these being: First, That two years is ample time for any young woman with average intelligence and industry to acquire sufficient didactic training in a well regulated course of class exercises and study, and the experience gained in actual nursing work in connection with these studies to qualify her for the practical duties her vocation intends. Second. The compensation she receives or may ever hope to receive does not justify a longer course. Third. The average professional or working life of a nurse after graduation is too short to justify a longer course. That is to say, a very large percentage of these young women drop out in the first few years by marriage, etc., thus rapidly reducing their ranks, probably more rapidly than that of any other vocation or profession.

Therefore, be it resolved that it be the sense of the Muscatine County Medical Society, that the medical profession of the state in general should discourage the attempt to impose an elaborate and prolonged course on the part of our nurses' training schools, which results either in the making of, would be half-baked doctors or hypertrophied, over ripe nurses, either and both of them a failure for the purpose intended and impractical to inflict upon the public in general."

The Muscatine County Society wishes every county in the state to bring this matter before their respective societies, and the secretaries to notify the Muscatine County Society as to the attitude taken.

Dr. E. E. Sherman, of Keosauqua, secretary of the Van Buren County Society, has just been released from quarantine, after a serious seige with diphtheria. The disease was contracted from a patient. The doctor is fortunate in having a trained nurse—a daughter—in the family.

Dr. Ralph H. Parker, a reputable physician of Des Moines, has been much annoyed of late on account of an itinerant oculist, who goes about selling useless glasses for high prices and gives his name as Dr. R. H. Parker of Des Moines. Anyone locating the oculist Parker will confer a great favor by promptly notifying Dr. Ralph H. Parker, Fleming Bldg., Des Moines. The itinerant Parker is an illegal practitioner, so lookout for him and see that he gets his desserts.

The Poweshiek County Society met in Grinnell Feb. 6, with this program:

"Some Observations on Physical Training" by Miss Clara J. Andersen, Instructor in Physical Training for Women, Grinnell College.

"Right Living and Good Health" by Dr. Josephine Wetmore Rust.

"My Early Medical Experiences" by Dr. E. C. Bliss.

Routine Business of the Society.

The meetings for 1912 are April 2, Grinnell; June 4, Brooklyn; Aug. 6, Montezuma; Oct. 1, Malcom; Dec. 3, Grinnell.

The Clay County Society met Dec. 6, and elected officers for 1912. President—Dr. J. B. Wertz; vice president—Dr. Porter Wertz, both of Spencer; secretary-treasurer—Dr. G. B. Snyder, of Everly; censors—Drs. Chas. Mc Allister, W. J. Durant and F. J. Coleman, for 3, 2 and 1 year periods, respectively; delegate Dr. W. J. Durant.

The Jefferson County Society met in Fairfield Jan. 26. Papers by Dr. A. S. Hague on Pneumonia and Dr. C. C. Tallman on Physical Diagnosis were read and fully discussed. After this a full and free discussion concerning the New County Hospital was had. The attendance was good—twelve physicians and their wives being on hand for both dinner and the program.

The Burlington Session.

Never before has the profession of the convention city been more united and enthusiastic than is Burlington in making preparations for the coming session of the Iowa State Medical Society. With Dr. Charles P. Frantz as chairman of the local committee of arrangements, nothing is being left undone to make the next session a memorable one in the history of the society. The slight disadvantage of location will disappear in the warmth of reception and in the completeness of all arrangements for scientific work and social functions. Burlington promises to make the session the best in the history of the Society, and Burlington does things.

The scientific committee is pleased to announce that Professor George Dock, of St. Louis, will deliver the Address on Medicine, and that Professor S. C. Plummer, of Chicago, will deliver the Address on Surgery. To add to the interest of the work of the Section on Ophthalmology and Otolaryngology, Chairman Harkness announces that Professor S. J. Kopetzky, of New York, will deliver an address to that section, which, as has been the custom during the past few years, will convene in separate session. Section Chairmen Ely and Jennings report a splendid list of papers. Altogether, the outlook is most flattering for a great meeting.

Greene County Society elected officers for 1912 as follows: President, F. W. Dean, Jefferson; vice-president, C. D. Endfield, Jefferson; delegate, B. C. Hamilton, Jr., Jefferson; secretary-treasurer, G. W. Kester, Grand Junction. The outlook for an active progressive society this year is good.

Page County Society, at a recent meeting in Clarinda, elected officers for the new year, president—R. S. Dutton, of Shenandoah; vice-president—R. J. Matthews of Clarinda; secretary-treasurer—B. S. Barnes, of Shenandoah; censor for 3 years—W. F. Statler, of Shenandoah; delegate—T. E. Powers, of Clarinda, with J. F. Aldrich, of Shenandoah, as alternate. Next meeting at Shenandoah, March 21.

Montgomery County Society elected officers as follows, for 1912: President—Dr. W. S. Reiley, Red Oak; vice president—Dr. A. L. Lindquist; secretary—Dr. Velura E. Powell, Red Oak; treasures—Dr. F. S. Williams, Villisca; delegate—Dr. W. S. Reiley.

The Muscatine County Society met in Muscatine on Friday, Dec. 15, 1911. Election of officers for 1912: President—F. L. Little; first vice-president—G. A. Heidel; second vice-president—H. H. English; secretary-treasurer—W. H. Johnston; censor—W. S. Norton; delegate—A. R. Leith; alternate—H. M. Dean.

At the last meeting in December of the Pottawattamie County Society the following officers for the year 1912 were elected: Dr. N. Jasper Jones, president; Dr. A. A. Robinson, vice president; Dr. Grant Augustine, Minden, secretary-treasurer; Dr. H. B. Jennings, delegate to the state Medical

Society; Dr. F. W. Dean, Council Bluffs; Dr. F. W. Pierce, Carson; Dr. J. H. Cole, Council Bluffs, board of censors.

Following was the program for the meeting, at the Hotel Burlington, at eight p. m., February 14th, of the Des Moines County Medical Society.

Diphtheria—Diagnosis and Medical Treatment, Dr. E. J. Wehmann. Discussion—Dr. C. F. Wahrer, Ft. Madison. Tracheotomy—Dr. F. M. Tombaugh. Discussion—Dr. A. W. Sherman. Intubation—Dr. E. F. LaForce. Discussion—Dr. C. P. Frantz. The Relative Value of Tracheotomy and Intubation—Dr. E. M. Hanson, Keokuk. The Nursing of a Medical Case—Miss Mary C. Jackson, Keokuk. The Nursing of a Case of Tracheotomy—Miss Anna Endberg.

Dallas-Guthrie County Society met at Arlington Hotel, Adel, Thursday, January 18, 1912.

Program: Symposium on Symptoms and Treatment of Pneumonia and Complications. Be prepared to take part in the discussion.

At its meeting of Jan. 30, the Polk County Society listened to a paper on "The Condition of the Public Water Supply" by Robert N. Kinnard, B. S., also a paper on "A Report of the Symposium on Shock Before the American Physiological Society," by W. L. Mendenhall, M. D.

For 1912, Walter L. Bierring is president, L. W. Osborne is vice-president, Nellie S. Noble is treasurer and Thos. F. Duhigg is secretary.

Union County Society elected J. N. Reynolds president; J. W. Frey vice-president; G. C. Coakley as secretary-treasurer, and O. S. Barker as censor. Dr. J. N. Coakley, O. E. Coakley and T. V. Golden, all of Creston, were elected to membership

Beuna Vista County Society elected C. W. Ellyson of Alta, as president; E. E. Smith, of Sioux Rapids, as vice-president; E. F. Smith of Storm Lake, as secretary-treasurer. J. W. Morrison, of Alta, as delegate, with F. C. Faley, of Newell, as alternate. Censors: Drs. Delahunt, Swalum and H. O. Donahue.

Adams County Society met at Corning, Dec. 20 and elected officers for 1912. Dr. F. P. Amdor of Carbon is president; Dr. J. H. Wallahan, of Corning is vice-president; Dr. C. H. Bryant, of Corning is secretary; Dr. J. H. Wallahan was elected delegate with Dr. W. F. Amdor as alternate.

The Journal goes to press eight days before the date of issue, that is, we can get nothing inserted after the sixth of the month. Printing in saddle back form, as we do, we have to have everything ready in the forms before beginning printing. The postoffice requires that the pages be numbered serially, and we need to know how many pages we are going to print before we can make up the headlines. Let us have your contributions early and we will find a place for them.

Dr. Hughlings Jackson.

Dr. John Hughlings Jackson, M. D., consulting physician to the London Hospital and the National Hospital for the Paralyzed and Epileptics, died at his residence in London at the age of 76. Dr. Jackson was known all over the world as a neurologist of wonderful attainments and the discoveries he has made in this branch of medical science will make his name revered for centuries to come.

The Medical Society of the Missouri Valley will meet at Colfax, at Hotel Colfax, March 21 and 22. This is a progressive and aggressive independent society. A good time—socially and scientifically is promised. A committee of arrangements from the Polk County Society—Drs. G. N. Ryan, Chm.; A. P. Stoner, Daniel Glomset, R. G. Davis, J. W. Strawn has the meeting in charge. A reception committee of ten well-known physicians has been selected. Prepare to attend and hear this program:

The Role played by the Dispensary in the Care and Treatment of Tubercular Patients, J. H. Beck.

The Present Status of Tuberculosis in Iowa, J. W. Kime.

The Results of Koch's Tuberculin and Spengler's Immune Blood in the Treatment of Tuberculosis, D. G. Mendenhall.

Tuberculosis from the Standpoint of the Surgeon, Chas. Ryan.

The Economic Waste in Disability and Death Due to Preventable Disease, Rev. A. E. Kepford.

Diagnosis of Diseases of the Kidney, R. R. Hollister.

Catheterization of the Ureters, Bransford Lewis and E. G. Mark (stereopticon slides).

Hematuria of the Kidney, Jno. Summers.

Malformations of the Kidney, Daniel Eisendrath.

Tuberculosis of the Kidney, Lewis Wine Bremerman.

Surgical Kidney, A. C. Stokes.

Puerperal Thrombo-Phlebitis, Palmer Findley.

Incipient Neuroses and Psychosis, W. B. Kern.

Arthritis Deformans, Arthur Steindler.

The Early and Late Diagnosis of Gastric Carcinoma, Walter L. Biering.

S. G. Burnett and A. L. Skoog will present a symposium on "The Transcendency of Migraine, Family Tree Illustrations" (stereopticon slides).

The Prevention and Treatment of Deformities of the Chest (stereopticon slides), H. W. Orr.

Caesarean Section for Placenta Previa, Donald Macrae, Jr.

Physical Methods of Treatment in Gastric Disorders, J. C. Waterman.

The importance of Mixed Feeding, H. M. McClanahan.

Title unannounced, Wm. Jepson.

Title unannounced, R. A. Weston.

Longevity, W. H. Waugh.

Medical Conditions in India, D. C. Bryant.

Typhoid Spine, with report of cases, W. O. Bridges.

There is plenty of work for the county society secretary. There are several hundred physicians in Iowa who should be in the society. They are eligible, but have not been interested. Some men need to be approached frequently, insisting that they recognize that which is for their own good. Get every good man in your society, you need him and he needs you. I know of no way to get men in the society except for the secretary to get them in. Try it this year and see what you can do.

Let every secretary or treasurer do a little extra work now and collect all the dues and get in all the eligible men early in the year, then the balance of the year can be devoted entirely to the program. We want to publish a complete membership list in the April Journal. Furnish us the names and we will see that they are printed.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

D. S. FAIRCHILD, M. D.....Clinton
EDITOR

C. A. BOICE, M. D.....Washington
ASSOCIATE EDITOR

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No. 9.

CLASSIFICATION, MANAGEMENT, EDUCATION AND MEDICAL TREATMENT OF THE FEEBLE-MINDED.*

MURDOCH BANNISTER M. D., Ottumwa, Iowa.

Feeble-mindedness is defined by Dr. Goddard as "a state of mental defect from birth or from an early age due to incomplete or abnormal development in consequence of which the person so afflicted is incapable of performing his duties as a member of society in the position in life in which he is born."

For convenience of classification, three grades of the feeble-minded are recognized by psychologists, the idiots, the imbeciles and the morons.

"An idiot is one so defective in mind from birth that he is unable to guard himself against common physical dangers."

"An imbecile is one so defective from birth or early life that he is unable to earn his own living but can guard against common physical dangers."

"A moron is one who is capable of earning his own living under favorable circumstances, but is incapable from mental defect existing from early life, from competing on equal terms with his normal fellows, or of managing himself and his affairs with ordinary prudence.

Idiots never attain a mental calibre above that of a normal child of three years. Their mental age ranges from one to three years inclusive.

Imbeciles are those whose mental calibre ranges from four to seven years inclusive.

Morons are those whose mental calibre ranges from eight to twelve years inclusive.

As regards causation, heredity stands pre-eminently at the head of all other causes. In the majority of cases, the feeble-minded child has had one or more feeble-minded ancestors. Besides heredity, we find as causes, epilepsy, which is itself hereditary, infantile convulsions, injuries to the head at birth, disease or debilitated condition

*Read before the Wapello County Society, Jan. 16, 1912.

of the mother before birth, cretinism, age of the parents, syphilis, tuberculosis or alcoholism in the parents.

There are two very interesting and rare classes, the Mongolians and the Cretins. The Mongolian idiots, so called from the peculiar slant of the eyes and the lack of development of the back of the head, are a peculiar and not numerous class. These are usually born of a worn-out mother, one well advanced toward the menopause and who has born a number of children. They are dwarfs—they never attain any great age—usually dying under thirty. They are very imitative and are very amusing mimics.

Their mental deficiency is a good illustration of pre-natal arrested development.

The cretin is one who from birth has suffered from hypothyroidation. These also are dwarfs—their thick skin, thick, protruding tongue, coarse hair and protruding abdomen, form a picture which once seen is not soon forgotten.

Early and continuous treatment with thyroid extract is often rewarded by rapid physical development if begun early. The mental improvement, though marked, seldom keeps pace with the physical growth.

Many enfeebled minds are made so by epilepsy. This terrible disease, particularly if it commences in early life works a gradual destruction of the minds of its victims.

The existence of epilepsy can frequently be traced to parental alcoholism, but feeble-mindedness other than that produced by reason of epilepsy, is not often caused by alcoholism in the parent.

Inherited syphilis usually attacks other parts than the brain. These two great racial poisons, syphilis and alcohol, so potent in causing insanity, do not seem to be especially potent in producing feeble-mindedness.

The feeble-minded in the state of Iowa and throughout the other states in the Union, are for the most part cared for in their homes. The several counties also care for a large number in the county homes.

As the feeble-minded are not reported separately from those of the poor who are not feeble-minded, it is not possible to give exact figures, stating the number of feeble-minded in the county homes. It is not possible either, to state definitely the exact number of feeble-minded who are cared for in their own homes.

The state of Iowa maintains an institution for the care of the feeble-minded and demented epileptics, viz., the Institution for Feeble-minded Children at Glenwood. In this institution there are about 1300 feeble-minded and feeble-minded epileptics. Besides this, there are five other state institutions in which feeble-minded are kept.

A considerable proportion, probably 15 per cent of the youthful offenders in the Industrial School for Girls at Mitchellville and in the Industrial School for Boys at Eldora, are feeble-minded, although they have enough mind to receive a certain amount of instruction. The combined population of these schools is about 500.

A larger per cent, estimated variously from 15 to 30 per cent of the 600 prisoners in the State Reformatory at Anamosa, are mentally deficient and there is also considerable per cent of the 512 men in the State Penitentiary at Fort Madison who are sub-normal in intellect.

Of the two hundred inebriates in the State Hospital for Inebriates at Knoxville, a considerable per cent are deficient mentally.

In each of the four state hospitals, Mount Pleasant, Independence, Clarinda and Cherokee, there are a small number of feeble-minded who are also insane.

There are all told in state institutions, close to 1700 feeble-minded individuals. There are probably at large in the state about 4300 individuals who, for their own good and the good of the community, should be cared for in some institution. In the United States there are about three hundred thousand feeble-minded individuals.

If one will but stop a moment and consider the vast amount of troubles, financial loss and misery, which a feeble-minded person can cause to the family of which he or she is a member, it is easy to understand that the combined burden of these 300,000 people is enormous. The monstrous load of immorality, crime and intemperance which these people cause, is so stupendous as to be hard to comprehend.

The feeble-minded are usually un-moral, sensual, unreliable as to truth and veracity, and intemperate in the use of alcohol or narcotic drugs if they are started in their use.

As to the treatment and education of these unfortunates, it is self-evident that where the mind is lacking, it cannot be supplied. The feeble-minded are not happy when they are compelled to associate with normal people—they are an object either of pity or of ridicule—and no one, even one of minor intelligence, likes to feel that he is either pitied or ridiculed. These people should all be colonized, classified in the colony and cared for at the public expense. Expensive as are the special institutions for their care, a feeble-minded person in an institution costs but a small fraction of what this same person would cost if allowed to live in the community at large.

Besides the happiness of the afflicted one and the economy of maintenance, colonization affords the best means of preventing the feeble-minded from becoming the parents of children, who in their turn, are almost sure to be defective. The feeble-minded, outside of the idiots, are prolific. The average feeble-minded family in

England is found to contain 6 4-10 children while the average family with normal parents but 4 6-10 children.

As to education: While it is possible to teach many feeble-minded children to read and write and to comprehend arithmetic to a limited extent, yet the most useful education for them is the teaching of some handicraft at which they can obtain some exercise and which may be of some practical value.

At the school at Glenwood, a number of the finest of teachers are endeavoring to teach the dull minds of the children the branches taught in the public schools. The work requires unusual skill and patience, and a great deal of time is given to each individual. The results are not satisfactory in any large number of cases, for there is but little use in trying to educate a mind if there is no mind to educate. There is a physical and manual training department which produces some good practical results.

What plan of treatment and what method of management should be applied to the feeble-minded?

The most pitiable class are the idiots. They are a source of pity and pain to all with whom they come in contact. Nothing is more distressing than the sight of a helpless, harmless, untidy, dribbling idiot. The imbeciles are often a menace to the safety of others and a menace to property. Their tempers and passions are not under their control and they are clearly incapable of doing much good for themselves on the outside. It is clearly evident that these two classes should be kept in custody in an institution.

The case of the morons is not so well understood by the public at large. These people, while apparently the least objectionable, are really the most dangerous type. They are often of attractive physique; they can do certain work and they can be educated to a certain extent. The average citizen, therefore, does not understand why this class should not be at large and should not be allowed to get along as best they can. This is an awful mistake, for as said before, this class is the most dangerous of all. These people cannot hold their own against the competition of the normal people on the outside. They therefore resort to criminal methods to obtain a living. This is the class that furnishes the most of our prostitutes. This class also furnishes the "habitual criminal." One-half of the convicts in the penitentiaries of the country have already served one or more previous terms in the penitentiary, some have served half a dozen terms and have altogether lost track of the number of their jail sentences.

The class of prisoners known as "repeaters" or recidivists, are often men of sub-normal mental endowment. The high grade imbecile class, or morons, furnish also a very considerable proportion of the drunkards of our state. Oliver Wendell Holmes, in his "Ode to a Punch Bowl", was very nearly right when he wrote:

“Hast thou a drunken soul?
The fault is in thy shallow skull
And not in my punch bowl.”

While this is undoubtedly true, still there is no particular advantage to be gained by any poor fool allowing the contents of the punch bowl to steal away what little brains he has.

The lesson of this paper is clearly prevention. The application of the principles of eugenics can scarcely be made effective by rigid laws forbidding the unfit to marry. Such laws might prevent the marriage of the feeble-minded but not the birth of their children. The wholesale sterilization of these people would probably have a bad effect on the morals of the community in which they were turned loose. The only method which promises a solution of the problem is segregation and permanent care in institutions especially designed for their residence.

I would urge you, as physicians of the community, to see to it that steps are taken to commit all feeble-minded people who are within your knowledge, to the institution at Glenwood. If this state and other states will adopt such a policy the great burden of immorality, drunkenness and crime, which weight so heavily upon this generation, will not be transmitted as a mill-stone on the neck of the coming generation.

THE SYMPTOMATOLOGY AND TREATMENT OF EARLY TUBAL PREGNANCY.*

MAX EMMERT, M. D., Atlantic, Iowa.

Upon the general practitioner rests the responsibility for the life of a patient afflicted with tubal pregnancy. I make this statement advisedly because the general practitioner usually sees the patient at a time when an early diagnosis and proper treatment are absolutely necessary to save her life. The importance of a working knowledge of this condition is increased by the relative infrequency with which it is encountered.

It is my hope to summarize our knowledge upon this important subject, so that we will have a working basis for recognizing and treating it. I wish also to report three cases which have occurred in my own limited experience. The first case was referred to me by Dr. R. Jones, of Griswold.

Case 1. The patient, aged thirty-five years, was brought to the hospital July 12, 1910 complaining of “pain in the lower part of the stomach.” Her family history was of no importance. The only serious illness the patient had had was inflammatory rheumatism four years ago. Her menstrual life began at twelve years of age and had

*Read before the Iowa State Medical Society, May, 1911.
Section on Surgery.

always been more or less irregular and accompanied by pain. She was married at the age of twenty-one years and had given birth to four healthy children. She had had four miscarriages, the last occurring six years ago. For the past eleven years she had had some pain in the lower left abdomen. She had had a regular menstrual period followed by leucorrhea three weeks before the present illness. The present illness began three weeks before admission, while at the breakfast table, with a smothering sensation accompanied by palpitation and pain in the precordial region. She felt weak and faint. Shortly afterwards she began to flow which continued more or less constantly for one week. Then she began to suffer from cramp like pains in the lower left abdomen and the uterine flow became intermittent. The bowels became constipated and urination painful. For two weeks she had severe headache and was nauseated. One week prior to admission she had a chill followed by fever and sweating.

The patient entered the hospital with a temperature of 99 degrees F. and pulse 110. The temperature oscillated between 99 degrees and 101 degrees F. until operation. The abdomen was not distended, but very tender over the lower third where muscle spasm was elicited on palpation. An indefinite mass could be outlined in the lower left inguinal region. On vaginal examination the parts were found to be exquisitely tender. The cervix was slightly softened and a hard ridge with several bosses could be felt in the cul-de-sac. There was no marked bulging of the vaginal wall. Nothing more was learned by rectal examination.

On July 15th with the patient under anesthesia the cervix was found to be dilated and a thin membrane protruded from it. There was no marked bluing of the vaginal mucosa. On opening the abdomen the uterus and adnexa were found adherent to the adjacent bowels and pelvic structures. Accidentally breaking thru the adhesions allowed a bloody serous fluid to escape and soil the adjacent intestines. The necrotic condition of the left tube and ovary and posterior surface of the uterus necessitated their excision.

After making the necessary toilet vaginal drainage was established, the omentum placed over the raw surfaces and the abdomen closed. After a stormy convalescence consisting of post operative dilatation of stomach and intestines, general peritonitis, thrombosis of the right popliteal artery, infarction of the lung, et cetera, the patient recovered.

Case 2. The patient, aged twenty-one years, consulted me on Oct. 15, 1910 complaining of "pain in the lower part of her stomach". The family history was unimportant. Her menstrual life had been normal. In April, 1910 she had given birth to a seven month's fetus which was considered to be leucic by the attending physician. Her menses returned six weeks later and were regular. The last men-

strual period occurred two weeks prior to the present illness. Her present trouble began on October 12th with uterine hemorrhage and slight pain. Two days later she had a sudden attack of pain in the lower right abdomen which caused her to faint. During the evening of the same day she had suffered from intermittent pains in the lower abdomen which radiated to the right back. There was a feeling of weight in the abdomen and a constant desire to defecate.

On examination the patient was found to be a well nourished woman whose facies were slightly flushed. There was no distension of the abdomen, but some muscle spasm and tenderness in the lower right inguinal region below McBurney's point. The point of greatest tenderness being about two inches above the pubes and slightly to the right of the median line. There was slight tenderness to the left of the median line. Vaginal examination revealed a bluish coloration of the vaginal mucosa. The cervix was not noticeably softened. To the right of the cervix extreme tenderness was elicited and a mass could be felt in the region of the right ovary. On rectal examination a boggy tender mass could be felt pressing on the rectum. The patient was placed under observation for twelve days, during which time she suffered from intermittent pains and periods of uterine hemorrhage. The temperature was always sub-normal varying between 97 degrees and 98 degrees F. The pulse was from 60 to 72. A tentative diagnosis of tubal pregnancy was made and operation advised, to which the patient consented.

The patient was anesthetized on October 27th. No visible membranes were obtained on curettage of the uterus. On opening the abdomen the omentum and loops of the intestine were delivered from the pelvis and packed back without difficulty. This liberated a dark bloody fluid in the pelvis. Slight difficulty was experienced in breaking up the deep adhesions and delivering the right tube and ovary. The rupture had occurred in the ampullar region of the tube. After excising the tube and ovary and removing about a teacup full of clotted blood, the necessary toilet was made, vaginal drainage established, the omentum placed over the raw surface and the abdomen closed. The patient made an uneventful recovery.

Case 3. On October 17th, 1910 I was called seven miles in the country to see a patient from whom the following history was obtained several days later. The family history was of no importance. The patient, aged twenty-six years, had never had any serious sickness. Her menstrual life had always been normal. She had been married for ten years and had given birth to three healthy children and had had one miscarriage. About one month prior to the present illness she had been seized with a sudden pain in the lower abdomen and nearly fainted. She was apparently well in twenty-four hours. Two weeks ago she had had a regular menstrual period. On October

13th she suffered from another attack of weakness and nearly fainted. For several days she had been flowing.

On the morning of the present illness she had assisted in lifting a heavy article and fifteen minutes later noticed a peculiar weak and dizzy sensation. Shortly after this she had a severe pain in the lower abdomen and fainted. She was found by her father three hours later. While trying to revive her she stopped breathing, her head fell back and he thought she was dead. However, he succeeded in forcing a little whiskey into her mouth which revived her. I saw the patient five hours after the beginning of the attack and found her in collapse. No radial pulse could be distinguished. She was semi-unconscious and suffered from spasmodic pains in the abdomen. The temperature was 96 degrees F. Her extremities were cold and mucous membranes very anemic. The dependent part of abdomen was distended and boggy. It was exquisitely tender and the edge of the contents was palpable.

Under expectant treatment she began to rally in two hours and improved rapidly. On November 9th she was taken to the hospital and the right tube, ruptured in the isthmic portion, was excised. The posterior surface of the uterus was somewhat necrotic, but was left undisturbed. Vaginal drainage was established and after making necessary toilet, the abdomen was closed. With exception of a parotitis requiring incision and drainage, the patient made an uneventful recovery.

The most interesting feature of this case is the fact that when first seen, the abdomen was half full of blood and five days later no trace of it could be found on physical examination. During these five days when the patient was turned from one side to the other, the dullness also shifted, showing that the adhesions did not form fast enough to retain the clot in one position. At the time of operation some clots were removed from the pelvis.

Tubal pregnancy is an abnormality of many variations and frequently it is very difficult to differentiate it from normal uterine pregnancy. It often occurs in women who have borne children and have become pregnant after a long period of sterility. The early symptoms vary somewhat from those of normal uterine pregnancy, but a positive diagnosis before rupture cannot be made from the symptoms alone.

Cessation of menstruation occurs in only 43 per cent of the cases and consequently is of little importance unless present.

Morning sickness occurs about as frequently as in uterine pregnancy, or in one-half to two thirds of the cases. As this symptom does not appear until about the end of the first month it is of little use for an early diagnosis.

The nervous phenomena of pregnancy; such as, despondency

and tinnitus auris are said to be exaggerated in tubal pregnancy.

Intermittent colicky pains in one or both ovarion regions is one of the most characteristic symptoms. These pains vary in severity, but in all cases are intense enough to attract the patient's attention. They may or may not radiate to the thighs or back. These pains are rarely seen in uterine pregnancy.

Abnormal menstrual flow occurring at a time when not expected is another suggestive symptom and is of great value in establishing a diagnosis. Cullingworth places some importance on the character of the bloody discharge. He says that in uterine abortion the blood is large in quantity and consists partly of clots where as that of an ectopic gestation, is usually dark in color, more or less ropy in consistence and that clots seldom occur.

Vomiting when present is the most deceptive symptom, as it often points to a lesion along the digestive tract and especially in the appendix if the pregnancy be on the right side.

When the patient is seen before the rupture and pregnancy is suspected, a great deal may be learned by vaginal examination. The signs are not as marked as in uterine pregnancy, but usually a slight blue color of the vaginal mucosa is present and the cervix may be slightly softened. The size of the uterus varies but it is never as large as we would expect for a uterine pregnancy of the same duration. It never becomes larger than a four months pregnant uterus. It may lie to either side of the median line. The most important sign is the discovery of a mass between the uterus and the ovary, which is usually very tender. Something of importance may be learned from rectal examination, which should always be made irrespective of vaginal findings.

In a great many cases the true condition is not suspected by patient or physician until tubal abortion or rupture occurs. This may occur between the second and fourteenth week of pregnancy, the majority occurring during the second month. It is usually ushered in by an intense lancinating pain in the lower part of the abdomen which is unlike any pain the patient has ever experienced. Often it is so intense as to cause her to faint. If the hemorrhage is slight she will soon partially recover, but feels more or less weak for several hours. There may be anemia which is one of the most important signs of hidden hemorrhage.

The uterine hemorrhage may start before or after the rupture and is accompanied by colicky pains, which, however, are less intense than the initial pain.

If the hemorrhage is profuse the respirations become shallow and rapid, the mucous membrane pale and later blue, the temperature steadily drops below normal, the pulse becomes weak and rapid until it cannot be felt. The patient complains of feeling tired. She

sighs and yawns and gives all evidence of weariness. As a rule she retains perfect consciousness to the end. The extremities become cold and clammy and a cold perspiration may be visible on the skin. Death may occur in a few hours.

After the tubal abortion or rupture has occurred the diagnosis can often be made without vaginal examination from the history of the case. Vaginal examination is positively contradicted during or immediately after a profuse intra-peritoneal hemorrhage. It should not be made until at least twenty-four hours later as the ruptured vessel may be occluded by a blood clot only, and the slightest manipulation may dislodge it causing a fatal issue for the patient.

After the patient has partially recovered from the initial hemorrhage we often find the symptoms of irritation to the bladder and rectum. The bowels become constipated and urination painful. A frequent desire to urinate or defecate is indicative of irritation. The patient often has a feeling of weight in the pelvis and there may be a dull ache or pain radiating to the thighs or back.

A vaginal examination at this time will often reveal marked tenderness over the affected tube and a mass may be outlined. There may be bulging in the cul-de-sac or an edematous condition of the lateral and posterior walls of the vagina, which, associated with the symptoms, renders the diagnosis very probable.

If the diagnosis of tubal pregnancy is made before the rupture or abortion has occurred, the universal opinion advocates surgical interference as the only rational form of treatment. The old methods of endeavoring to destroy the embryo by injections or morphine or by the electrical needle are obsolete and rarely used. The wide difference of opinion among gynecologists regarding treatment is in reference to those cases which are not seen until after the abortion or rupture has occurred. Some advocate immediate operation in all cases and others are adherent of the expectant treatment. I do not think that iron clad rules can be made to govern these cases, but that each must be treated according to its individual merits.

If the patient is seen immediately after the rupture has occurred and shows alarming symptoms from hemorrhage: Ihm says we have "all to gain and nothing to lose by operating". (loc. cit.); Veit has remarked "that one must operate for extensive internal hemorrhage is beyond doubt" (loc. cit.) Martin, one of the greatest gynecologists on the continent, treats the patient expectantly until the hemorrhage is arrested and she has partially recovered from the shock before he operates. There are undoubtedly cases where the expectant treatment is dangerous for the patient. These are the cases of extensive intro-peritoneal hemorrhage which show no signs of abating after one or two hours of treatment with morphia and absolute rest.

In conditions of this kind immediate operation is demanded tho the patient may appear to be moribund. Vineland reports a case in which he operated on an apparently lifeless patient and succeeded in saving her.

Champneys claim that the fetus is generally destroyed in those cases in which a profuse hemorrhage into the peritoneal cavity has taken place, and that if the patient recovers from the shock she will generally recover without operation. However, in some cases the clots instead of being absorbed, become organized and imperil health by the formation of adhesions and their concomitant dangers. The greatest immediate danger from the blood clot is the liability to infection which may result in a peritonitis and septicemia. A slight rise in temperature is not necessarily an indication of infection for when the organism recovers from the shock and responds to the demands for repair the temperature may rise several degrees above normal. In my case of profuse hemorrhage, the temperature rose to 101.4 F. during the absorption of the clot. The pulse was comparatively slow.

If the tube has ruptured into the broad ligament or into a wall of adhesions, so that the hemorrhage is restricted it is comparatively safe to treat the patient expectantly, but having everything in readiness for an immediate operation in case of secondary hemorrhage. Statistics show that only 5 per cent of the mortality from tubal pregnancy is due to the primary hemorrhage, but the mortality per cent from secondary hemorrhage is much higher, which fact should constantly be borne in mind when treating a patient expectantly.

Cases of hematocele which do not absorb in a reasonable length of time may be opened and drained thru the vagina, but when the symptoms indicate that the fetus is still viable, the abdominal route is less dangerous for the patient. An infected hematocele is a contra-indication to abdominal incision.

Too much stress cannot be placed upon the necessity for absolute rest in these cases of rupture. The patient should not move her body or be moved during the first twenty-four hours. She should not be permitted to move herself for at least three days. Immediately following the rupture, morphia should be used freely to secure complete relaxation, ease the pain, and quiet the nervous system. After the hemorrhage has ceased, salt solution is indicated either by venous infusion, hypodermoclysis or proctoclysis. The bowels should not be moved for three days and then by a mild enema.

Resume.

Abnormal and irregular uterine hemorrhage occurring during the menstrual life of a patient and associated with intermittent pains in the ovarian regions is suggestive of extra-uterine pregnancy,

and when accompanied by the symptoms of pregnancy, renders the diagnosis probable.

The discovery of a tender mass on either side of the uterus associated with the aforesaid signs and symptoms, practically makes the diagnosis positive. If the diagnosis is established before rupture an immediate operation is advisable. If seen after the primary hemorrhage and life is threatened by the extensive loss of blood, operation is demanded.

If seen after the rupture and the hemorrhage ceases in a reasonable length of time it is comparatively safe to treat the patient expectantly. A pelvic hematocoele may be incised and drained thru the vagina. Infection is a contra-indication to abdominal incision. After the rupture has occurred absolute rest and morphia are the most important factors of immediate treatment. Salt solution is a valuable accessory after the hemorrhage has ceased.

Conclusions.

Any woman during the child bearing age who shows any abnormal signs or symptoms during pregnancy should be carefully examined with the intention of eliminating the possibility of tubal pregnancy. If this is done I believe that the mortality from tubal pregnancy will be greatly reduced and the proficiency of the practitioner greatly increased.

I wish to express my appreciation to Dr. Palmer Findley, of Omaha for his assistance in looking up the literature.

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Discussion.

A. L. Wright, Carroll: In rising to discuss this most excellent paper of Dr. Emmert's I wish to congratulate the Society and thank Dr. Emmert. There is but one question that I wish to emphasize, and that is the diagnosis. The subject has been so thoroughly gone over that the doctor has left but little for we old trainers to discuss. To summarize briefly, it may be said that the diagnosis of tubal pregnancy rests largely upon the following clinical manifestations:

1. An early history of pregnancy. These symptoms the doctor has

dwelt on and emphasized all the way through.

2. Pain in one side, severe at times.

3. Irregularity of the menstrual flow, and prior to rupture, a tumor in one or the other side of the uterus. After rupture, in addition to the pain, the patient presents a history of some profound disturbance. If seen at the time of shock due to the loss of a large quantity of blood, she is not only suffering from the most intense pain, but there is unmistakable evidence that she is bleeding somewhere.

J. F. Herrick, Ottumwa: It has seemed to me that at times too great an effort is made to clean out blood clots in cases of this kind. Unless the clots are infected, it is quite as well to close the bleeding point, and if the fetus is in the field, remove it and leave the clot to be taken care of by nature. My experience is somewhat limited, but I know that in three cases clots to the amount of a very large quantity were left in, and there was no evidence of any disturbance afterwards. Of course there was no infection, and I don't see why there should be in the majority of cases. I believe they should not be allowed to go on very long if there is any evidence of repeated bleeding; but when the bleeding point has been stopped by a ligature of the tube on either side of the rupture, and if the fetus, which sometimes is pretty well developed, can be removed, the clots should as a rule, I think, be left to take care of themselves. Of course very careful asepsis should be maintained in every phase of the operation, so that those clots may not become infected.

G. E. Crawford, Cedar Rapids: A personal experience with fifteen cases of this trouble, has convinced me, entirely contrary to the last speaker, that the clots are very likely to become infected on account of their contiguity to the bowels. I have seen several cases that were infected. What could possibly be the idea of opening the abdomen and trying the bleeding surface and leaving the clots I am not able to understand. I think the sooner we get those clots out the better for the patient.

P. B. McLaughlin, Sioux City: I enjoyed the doctor's paper very much. This is a subject that generally calls for heroic treatment, and generally that treatment has to be instituted at once, if it is to be productive of any results whatsoever. I would hate to be the doctor standing by the bedside of one of these cases and waiting with my hands behind my back to see whether the hemorrhage was going to stop or continue. We all admit one thing, gentlemen; that is the necessity of an early diagnosis in these cases. I have seen these cases diagnosed before rupture took place, and I am not a very old man. I recall that within the last two months a doctor living at a small town in my vicinity told me that he had diagnosed a case of tubal pregnancy and was insisting on that patient going to the hospital and being operated on. Three or four weeks afterwards I met the same gentleman again at my office, and he told me that rupture had taken place and the patient had died. I don't see why we want to wait until nature has been kind enough to rupture that tube into the folds of the broad ligament or on the top margin of the tube where the vessels are of a small calibre, and in that way control the hemorrhage. And if it has controlled the hemorrhage in that way, I don't see why we want to wait for the blood clots to become infected, which generally takes place, and finally a subsequent operation has to be performed in order to prevent a general septic condition and the soiling of the perineal cavity.

I wish I were as lucky in the treatment of my cases of tubal pregnancy as Dr. Emmert has been. He only lost one case; the other two ruptured into the broad ligament or at a point on the tube where there happens to be a small vessel, and he could take his time and operate nearly whenever he wanted to, or wait for that blood clot to become infected sufficiently for the patient's temperature and pulse to rise, and in that way force him to operate. You must admit that the one essential thing in any case of hemorrhage is to get in there and ligate that blood vessel and shut off the flow of blood; if you don't, you know what is going to take place in the majority of these cases. Whether it is a hemorrhage in the abdomen or any other place in the body, it is the same condition that we have to meet; an early ligation. Dump out the blood clots, if you want to, or leave them there; if you are fortunate enough not to have them infected, all well and good, and that will make your operation that much shorter. It all depends on the condition of the patient. Another thing I wish to emphasize is, never institute your normal saline treatment until

after you have that artery ligated, or at least the tube clamped; then go on with your normal saline. The doctor speaks of these patients having shock. I would not call it shock, unless we wish to call the condition of internal hemorrhage, shock.

W. W. Bowen, Fort Dodge: It is all right to talk about early diagnosis of these cases, but the trouble is that very few of these cases are seen at all until rupture occurs. A few tentative diagnoses are made of an unruptured tubal pregnancy. When that diagnosis is made, the majority of the women won't permit themselves to be operated on. So much for that. After the rupture has occurred, Dr. McLaughlin said he would hate to be the doctor that would stand by and see a woman bleed to death in a case of tubal pregnancy. So would I. I would hate worse to be the doctor who attempted to operate on that woman under unfavorable environments. The fact of the matter is, the most of them don't bleed to death; they get over it.

This question of immediate operation or waiting for operation is a mooted case in every medical society where this matter is discussed. We must take into consideration the surroundings of the patient and of the doctor, and remember that most patients will recover from the immediate effects of the hemorrhage if you let them alone.

The paper has covered the subject very nicely. I only noted one important omission, and that was the discussion of the vaginal operation. My colleague and I have had experience with twenty of these cases, and about one-fourth of them have been operated per vaginal. It is our rule—and I think it should be the rule always—that after hemorrhage has occurred, wherever the clot has become infected and there is pus present, to do the vaginal operation. Sometimes you will have to re-operate to correct the disease in the tubes, but usually you will not even have to do that; you will just have to do a cul-de-sac operation.

As to leaving the clots of blood in; take them out every time. You take them out in other abdominal operations, and why not in this? They are more likely to be infected than ordinary clots in the abdominal cavity.

W. B. La Force, Ottumwa: I want to refer to the difficulty of diagnosis in some of these cases, and I want to recite briefly three cases of which I have knowledge in my own experience.

One of them was a good many years ago, where probably the best practitioner in our city—at least with a large reputation—made a diagnosis of extra-uterine pregnancy, and introduced the electric needle; and in a few hours had a delivery per vagina of several months fetus.

Another case where I was called in to perform a post-mortem examination. A woman had been attended by a professed abortionist in the city. The woman died from a peritonitis, and it was presumed to have been produced by the abortion which was done. The post-mortem examination revealed that there had been an extra-uterine pregnancy, and that the peritonitis came from the infected hemotocoele.

The third case was one which was referred to me over the telephone, describing the symptoms, with a probable diagnosis of extra-uterine pregnancy. She was brought to the hospital, examination under an anesthetic found not to be in that condition, and she was delivered several months later—seven and one-half months—in the normal way. I mention this to show that the diagnosis is very difficult sometimes, even by very good men, and the anesthetic, I am sure, is necessary to make proper diagnosis in some cases. Of course in a good many cases it is very evident what the condition is. As the essayist mentioned, simply the history, without making any examination, either external or vaginal, is sufficient; but occasionally you have to resort to an anesthetic.

Dr. Emmert: I wish to thank the Society for their very liberal discussion of this paper. The point of contention seems to be mainly with regard to the blood clots. It seems to me when there is a small blood clot we can with safety remove it, and it is best to do so, because of the liability of infection; but where there has been profuse hemorrhage, so that the abdomen is full of blood, we must remember that that blood is exercising a very important function for the life of the patient; that is, it is creating pressure upon the abdominal vessels, thereby keeping the blood pressure up. Consequently, in cases of very extensive peritoneal hemorrhage it would be a very dangerous procedure to remove the entire amount of blood simply because if you remove that pressure the patient may bleed

to death in her own veins. Many authorities in a case of this kind, after they have opened up the abdomen, insert as much saline solution as the abdomen will hold, so as to keep up the pressure until the circulatory system has had time enough to recover its normal or nearly normal blood tension.

Dr. McLaughlin misunderstood me in regard to my cases; I did not lose a case.

Regarding the vaginal route of operation in pelvic hematocele, from theoretical reasons I think the vaginal route is alright providing the hematocele is easily accessible or is infected but I would prefer the abdominal route if there is no infection in the pelvis.

THE MEDICO-LEGAL ASPECT OF TRAUMATIC NEUROSES.*

F. A. ELY, M. D., Des Moines, Iowa.

From the time that the primitive locomotive first awakened the slumbering echoes of our peaceful valleys, even unto the present day of twentieth century limited, the subject of "railway spine," or, more scientifically speaking, traumatic neuroses, has occupied much of the attention of both the legal and medical fraternities. The evolution of modes of rapid transit, taken together with the anarchistic spirit of the present day, has done much to increase our taxes, overburden our courts, and place a premium upon damage suit perjury, to say nothing of scattering broadcast the dangerously morbid suggestion that the fright and shock, either physical or mental, attendant upon a railway, street car or automobile accident must of necessity leave a permanent brand upon the nervous system of all who are subjected to such unfortunate experiences.

We, as scientific physicians, setting aside all pecuniary influences which might tend to bias our judgment, have no hesitancy in recognizing the fact that shock and fright, combined with bodily violence and jarring, may produce nervous exhaustion even in the absence of any permanent or prolonged structural injury. We also recognize that hysteria may be in like manner produced without willful simulation on the part of the individual affected. But we must also, under the directing hand of consistency, recognize that from fifty to seventy-five per cent of the large judgments rendered against corporations and wealthy individuals for nervous injuries sustained are the direct outgrowth of blackmail, extortion and perjury, dressed up in lamblike habiliments of traumatic neuroses.

It is possible that the Carnegie funds appropriated for the maintenance of international peace and arbitration have been well set apart, but if some financial giant should in the future become afflicted with philanthropisomiasis, the writer feels that a heavy endowment might well be dedicated to the improvement of medico-legal conditions governing damage suits of all kinds. Be it said, to the honor of the medical profession, its one great aim is preventive

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medicine, while its members individually, like the corporations and money interests, are seized upon for a prey by the legal brethren who, Shylock-like demand their fifty per cent, no matter whether the client or the corporation is robbed in so doing.

It is a self-evident fact that the contingent fee proposition must of necessity rob one of two parties; the client or the individual from whom damages are obtained. Let us say, for example, that Mr. B. has been injured in such a way that \$2500 is a fair compensation for his disability. Now, if that amount is obtained from the party who is responsible for the accident, and the lawyer gets fifty per cent of the amount, the client is robbed. If, on the other hand, a verdict for \$5,000 is obtained, the responsible party is robbed of \$2500. It is logical, therefore, to state that from the viewpoint of the real injuries in a given case, estimated in dollars and cents, the contingent fee proposition is a graft from start to finish.

It may be said by way of argument that the unadvised client would not get his just deserts. Granting this to be true, the fact still remains that the contingent fee is a polite form of robbery, and should be prevented by law, there being two ways of taking care of the matter: first, the appointment of non-partisan experts; second, legal limitation of the fees to be allowed the ambulance-chaser. It is not within the province of this paper to dictate to the legal profession the reforms which they should institute, but it is hoped that in the future it may practice a little preventive law, modeled after the humanitarian plans of preventive medicine.

In the past ten years it has been the writer's privilege to examine quite a number of persons for the purpose of determining the extent of physical and nervous disabilities alleged to have been caused by the mental and physical shock attendant upon some railway or street-car accident, and in a list of one hundred or more cases only four or five have manifested typical hysterical symptoms, the remaining portion having complained of symptoms essentially neurasthenic. There are several reasons why traumatic neurasthenia is more common than its sister neurosis, hysteria: first, because nervous exhaustion is the logical sequel of fright and shock, while hysteria necessitates a dash of the dramatic which must be evolved from a vicious heredity; second, because the public is more familiar with the symptoms of neurasthenia; and third, because a legal adviser can more readily coach his client in the commonplace headaches, backaches, insomnias and lassitudes of neurasthenia than in the more intricate phases of paralyses, anesthetics and contractures of hysteria.

Assuming, then, that neurasthenia is the commonest form of traumatic neurosis, in such a case upon what is a medical expert to base an opinion in giving his testimony before the court? When the matter is thoroughly boiled down, it will be found that his opinion

must be derived from the patient's own statements, there being no known definite objective symptoms of neurasthenia. If the expert has been familiar with the patient prior to the accident, and has known him or her to be in perfect health, and has seen the same individual lose weight, become sleepless and develop anemia, etc., these factors may substantially direct his opinion; but otherwise he must rely upon what the patient chooses to tell him, and what he is told must be accepted in all cases pertaining to litigation with a certain degree of mental reservation; not because the patient wishes to lie, but because he or she may have been through the process of suggestion, made to believe that various symptoms are present. It is a laughable fact that although a neurasthenic usually likes to expatiate upon all his past illnesses when he consults the physician under ordinary circumstances, he always paints a rosy picture of his previous health when being examined for life insurance, or when he hopes to get a big verdict against a railway company.

When a medical expert is required to pass judgment upon a supposed case of traumatic neurasthenia, the patient never before coming under his observation, he should obtain a thorough history, not depending upon the statements of the patient alone, or upon those of interested relatives. If such previous history be obtainable from a responsible, dis-interested party, it should have some weight, and may enable the physician to make a more positive statement regarding the nervous and physical condition of the plaintiff; but as a rule such reliable history is impossible to obtain in a damage suit case, and this throws the expert back upon the plaintiff's statements; and these being unreliable, it is simply up to the jury, in the vast majority of cases, to pass upon the honesty of the plaintiff. And it may be here stated, parenthetically, that the average jury passes judgment, not upon facts, but upon their own prejudices, which further implies that the defendant is at the mercy of a jury governed by prejudice, the only limitations placed upon which are the instructions of the judge.

When an expert is interrogated concerning the symptoms of neurasthenia, he is obliged to admit that they are chiefly subjective in character; and in order to throw the responsibility back upon the jury he had best formulate his opinion in some such manner as this: "The plaintiff gives a correct rehearsal of the symptoms of neurasthenia." A statement of this character conforms strictly to the truth, but waves the responsibility of passing upon the veracity of the plaintiff.

One observation which, if properly made and interpreted, approaches the requirements of an objective symptom, is a concentric narrowing of the visual fields. In neurasthenia there is often noted a rapidly developing visual fatigue when perimetric observations are

in progress, and this fatigue manifests itself in narrowing of the fields for all colors. A scientific demonstration of this phenomenon lends some objective diagnostic weight to the subjective symptoms already obtained.

Although traumatic hysteria is not as frequently encountered as neurasthenia, it is often a matter of considerable importance, owing to the fact that it presents a number of objective symptoms which have much to do with the extortion of large sums by litigation. To a jury the contractures of hysteria are just as real as a similar condition brought about by organic disease, and it is often within the province of the medical expert alone to differentiate the two conditions, the necessity for which arises primarily in the different prognoses, that of hysteria usually being more favorable. Owing to the fact that hysteria brought about by traumatism is not essentially different from the other forms, its differentiation from organic disease, therefore, is the same, and the following points may be fittingly mentioned at this time.

It is a well-known fact that we are frequently able to outline areas of anesthesia and analgesia on the body surface of hysterical individuals, and that the character and location of the areas has everything to do with our decision as to whether they are the result of organic or functional disease, the distinctive characteristics of the functional type being their definite, abrupt transition from the normal to the abnormal and their con-conformance to segmental or sensory nerve distributions. In like manner, we observe that the motor paralyzes of hysteria are paralyzes of movements, in contradistinction to the loss of function in single muscles or groups of muscles which are anatomically related, as in organic disease. For example, a hysterical monoplegia is common, but a pure extensor paresis, with wrist drop or foot drop, is rather exceptional. When a motor paresis is present, it must of necessity simulate either the flaccid or spastic forms. We meet with little difficulty in distinguishing between a flaccid paresis of a functional nature and the organic, for the reason that the functionally paretic muscle will respond to the Faradic current. The only difficulty, therefore, which arises in this connection, is to distinguish between the functional and organic when the functional imitates spasticity. In this situation we can no longer rely upon the electrical reactions, but must resort to more delicate means of discrimination, which may be summarized as the presence or absence of the stigmata of hysteria, the presence or absence of symptoms definitely organic; including under the latter at least four important features, viz: sphincter disturbance, ankleclonus, Babinski's toe sign, and Babinski's combined hip and trunk flexion.

It is scarcely necessary to elaborate upon sphincter paralysis, except to say that it is exceedingly infrequent in functional diseases.

True, ankleclonus is seldom correctly imitated by hysteria, even though the extremity is apparently quite spastic. It is almost safe to say that the Babinski toe sign is never a functional manifestation, and in discriminating between a functional hemiplegia and that of the cortico-spinal type we are greatly assisted by Babinski's combined hip and trunk flexion, which procedure is carried out in the following manner:

The patient is placed flat on his back on a smooth, hard surface, with his arms crossed on his chest and the legs not allowed to touch each other. He is then asked to sit up without using his arms. In so doing, an organically paralyzed lower limb becomes flexed at the hip, and the heel is raised from the surface. At the same time the shoulder on the healthy side is carried forward to counterbalance the contralateral lower limb. In hysterical hemiplegia this rigor is absent, and the paretic limb remains unraised.

Having briefly discussed the salient differential diagnostic points, we must now briefly turn our attention to the matter of prognosis, and it is here that much difficulty arises, because it is impossible to make a definite statement in any case. It is probable that the following statements are the safest ones to make:

1st. That not all persons suffering from traumatic hysteria or neurasthenia get well.

2nd. That the greater the hereditary and environmental predisposition, the less apt are they to recover, and the greater the duration of symptoms.

3rd. That any marked improvement in the patient's condition prior to settlement argues strongly for a favorable outcome.

4th. That failure to make much improvement prior to settlement is to be expected, because of the morbid mental influence of the litigation.

5th. That the majority of patients recover within a period of three years.

6th. That the residuum of symptoms found after settlement is the result of bad heredity and previous constitutional nervous defect.

In conclusion, the writer wishes to urge upon all physicians who give testimony in damage suit cases in which traumatic neuroses are the basis of the claim, to guard well their statements, and to avoid all partisanship and prejudice. As long as there are no definite objective symptoms of neurasthenia, and in so far as that disease is so easily simulated, it is wise not to stretch a point in the plaintiff's favor, for you may be sure that his legal representative will do all that is necessary in that direction.

Discussion.

Dr. L. W. Littig, Davenport: I think one of the greatest factors in the production of the so-called traumatic neurasthenia is the attitude of the

physician who first sees the patient. It is so easy to tell a patient that he possibly has some injury to his spine; that you can not tell him just how long he is going to be disabled, or what the ultimate result of that injury may be; and as a result of a rather wavering attitude on the part of the attending physician the patient perhaps gets the idea that after all perhaps there is something wrong with his spinal column. If he had a broken leg, a fracture of the skull, or any serious injury on which you could set a term and tell him that after a certain number of weeks or months he would get well, that man would not develop a traumatic neurasthenia. But just as long as the physician makes that wavering diagnosis, and the contingent-fee attorney to whom the writer so aptly referred also sees the patient, and tells him that he perhaps will not get well, that man is sure to develop a traumatic neurasthenia.

I do not believe I ever have had a case of traumatic neurasthenia develop under my care, if I had sole charge of the patient. I assume a confidence that I may not feel myself. I tell the patient he is sure to get well after a certain length of time, and I try to direct his thoughts into legitimate channels. A case just occurs to me this minute in which a traumatic deformity was the result of a suggestion; and when I was on the witness stand I said to the court that the attending physician was to blame for that deformity. And why? After the leg had been in the proper fracture dressing for some five or six weeks the patient asked her attendant if she did not have a case against the city. "Why no," he said; "that foot is in perfect condition; it would not appeal to a jury at all." The next time he came the foot was in an extreme varus position, and it was in that condition simply because the attendant had suggested that the foot was too straight to appeal to the jury. I believe the most potent factor in the production of the so-called traumatic neuroses is the suggestion of the doctor that something serious may result, and the further testimony of the contingent fee attorney that something serious is quite sure to result. Given that sort of a surrounding, the wonder is that the so-called traumatic neuroses are not more frequent than they are.

T. B. Throckmorton, Chariton: I have listened with a great deal of interest to this most worthy paper just presented on this subject, and only remarks which I care to make further in regard to this are to emphasize one point in the diagnosis between functional and organic nerve diseases which the writer brought out, but which I feel should be a little further emphasized. He spoke about the so-called Babinski toe sign, known also as the extensor plantar reflex. For some time it was held by the leading neurologists of this country that this sign might possibly be obtained in some cases of hysteria, but I wish to state that now it is held that whenever this extensor sign is present you are dealing with, not a functionally nervous lesion, but an organic nervous lesion. Again, the reflexes in a hysterical patient, particularly the patellar reflex, are not characterized by the one long swing, wide sweep, but when the tendon is struck it is tremulous; and, as the essayist brought out, when ankleclonus is present, it is not true ankleclonus, but a pseudo-ankleclonus, and which cannot be simulated by the patient as a true ankleclonus.

Dr. Ely: I want to call attention to one thing. The mere fact that many of these patients assume symptoms is not indicative of the fact that they are willful simulators. They are hypnotized, so to speak. They have gotten into a morbid mental rut. I don't believe the majority of these people are trying to do wrong, but I know one lawyer in this city who is a regular hypnotist. He not only hypnotizes his clients, but also his witnesses. I have seen that man take witnesses out to lunch before the time for trial, go over the situation, tell what a horrible accident it was, how the cars were piled up on each other, and what a terrible suspense the patient had been under, and hammer that into those witnesses until he had them spellbound. I believe it is the lawyer, nine times out of ten, and the inadvertent physician, who is responsible for this. There are few who do not know that such a thing as a railway spine has occurred, and the knowledge, is so prevalent that the suggestion finds an easy lodgement.

Just one word with regard to the regimen. A master in the neurological art took me to task a short time ago for saying that a reflex was exaggerated because I did not have the Babinski toe sign or an ankleclonus. We may say that the reflexes are exceedingly active, but unless this can be confirmed by the Babinski toe sign or ankleclonus, it is not a

safe to say that the reflexes are exaggerated. I have had a number of disagreeable experiences. Two or three times I have made a diagnosis of a functional trouble, thinking that possibly the Babinski toe sign could be accounted for on the ground of a functional neurosis. In every instance I found that I had made a mistake in diagnosis. Now when I see a Babinski toe sign my diagnosis is always that of an organic nervous lesion.

SALVARSAN AS A DRUG.*

ROBERT A. WESTON, M. D., Des Moines, Iowa.

The rapid progress of surgery, and surgical pathology during the last twenty years had so eclipsed anything achieved in medicine that it was generally conceded a foremost place, and medicine relegated in the background. But it did not remain so long, for one discovery having been made others quickly followed and many new and startling things were announced during the period of a few short years.

The foremost of which I will mention: Metchinkoff's and Roux's discovery of the transmissibility of syphilis to the lower animals. Schaudinn's and Hoffman's (2) discovery of the *Treponema Pallidum* (*Spirocheta Pallidum*). Wasserman's (3) complement fixation test, and Ehrlich's (4) discovery of paradioxy diamido arsenobenzoldihydrochloride, or 606, whose chemical formula is $C_{12}H_{12}O_2N_2As_2$, HCL.

This is the result of the development of numerous arsenical preparations, chief among which was atoxyl.

Ehrlich discovered that this preparation, i. e. atoxyl, could be modified so that it would be parasitic but not organotropic. He analyzed it and by certain additions discovered the product which bears his name; and who could have been selected as a more fitting discoverer, the man who had already rendered his name immortal, was given the foresight to do his greatest work after years of constant research. May he live to see his fondest dream materialized, his brightest ambition realized.

Having now his preparation completed, it was tried on animals and then on man, by Hayta, Wechselmann and others; after establishing its virtue by trial upon between twenty and thirty thousand patients, it was marketed in all parts of the world, and ever since it has held the center of the stage of discussion in all medical literature.

The use of this wonderful product in a pronounced case of syphilis seems little less than miraculous, so rapid is the improvement.

No case should receive treatment, however, without a Wasserman reaction, (5) and having a positive Wasserman we must decide upon the method of administration, among which may be mentioned:

Methods of administration: 1, intravenous, 2, intramuscular,

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Section on Materia Medica and Therapeutics.

3, subcuticular. The first two being the only ones worthy of serious consideration.

For sometime I used a combination of these methods the intravenous injection being given first, and in from four to six days an intramuscular. I have now abandoned all methods except the intravenous.

The technique of which is simple and the results uniform.

I will state briefly this method: Put 50 c. c. hot physiologic saline solution in a florentine flask, then add salvarsan powder, which has been carefully placed in a 1-1000 bichloride solution, now thoroughly shake the flask until salvarsan is dissolved, add 23 minims of 15 per cent sodium hydrate solution B. P., then add 250 c. c. cool physiologic saline solution, and test for temperature.

If this solution is cloudy add a few drops of sodium hydrate until it gets clear and remains so.

Now strain this solution through several layers of gauze, prepare the patient's arm, and by placing a constricting bandage about the arm the vein can be easily entered and the solution injected, each 50 c. c. of solution representing .1 gramme's of salvarsan.

I do not use the Schreiber method, or any of the open vein incision methods.

In over 50 injections I have had one case of arsenical neuritis lasting a very short time.

One case of arsenical herpes following the principal nerve trunks.

I had no infections in any, and but little detention from business, except cases which were confined to the hospital for four days.

I now give this injections in my office, allowing the patient to go home in two to four hours as I see fit.

After the solution is injected the pulse increases 10 to 30 beats per minute and in 20 minutes patient complains of chilly sensation and some have distinct rigors.

I attribute this to the injection of solution below the blood temperature, as I have only seen it in cases where my technique was slowly carried out.

Nose bleed and headaches of severe frontal character may follow injections. I had one case with former.

Diarrheas are often present but of a transient character.

Effects on lesions. On primary lesions the effects are usually slow, the chancre usually healing in from seven to seventeen days, the same as with mercury, or without any treatment.

The secondaries are not regular in time of appearance so that judgment as to their appearance after salvarsan would be of little value.

After they have appeared, however, salvarsan exerts a striking

influence over them, causing their rapid disappearance in a few hours or days.

One injection does not always influence their appearance as in two of my cases secondaries appeared two and one half months after injection. (the patients had primary lesions at time of injection).

On tertiaries the effects of injections are slow and several must be given before the Wasserman becomes negative. The effects on discharging sinuses are not good, which fact is probably due to the avascularity, the drug or its antitoxin having never reached the spirocheta in the lesions.

Local treatment as cauterization, (medicinal and mechanical) should supplant or be used in conjunction with salvarsan in these cases.

Effects on Wasserman reaction. Salvarsan does not render a negative Wasserman in most cases under four to six weeks, preferably eight weeks after injection.

One injection does not render a negative reaction in all cases.

A Wasserman after being negative may again become positive, due to the liberation of more spirocheta which originally had no communication with the circulation at the time the reaction was taken. Ulceration and absorption of toxic material. It has not, in my hands produced as constant and as uniform a negative Wasserman as cases which had received mercurials well for eighteen months, and then removed from treatment for two months before reaction was taken.

Early recurrences. In twelve of my cases some form of symptoms have necessitated the giving of one or two additional injections.

These all gave faintly positive Wasserman before being re-injected.

I doubt very much that the time will ever come when one injection will absolutely cure, but if a number will effect a cure which it has taken mercury years to do it will indeed be a God send.

As an aid to other forms of treatment. It has been my practice of late to administer iodides after injection of salvarsan, thus causing the absorption of any isolated deposits and the liberation of spirocheta which may be killed with a later injection.

Salvarsan has come to stay, and will be used in conjunction with mercury and iodides in the treatment of syphilis even though it may not supplant them.

Untoward effects. Among the most severe effects may be mentioned arsenical poisoning, with headaches, severe gastric pain, vomiting, severe muscular twitchings, which are usually spastic in character, and sometimes associated with convulsions.

Arsenical neuritis may follow its administration, which is very painful but not dangerous.

Herpes following certain nerve trunks which is not painful and only annoying.

Cancerous diseases are said to follow administration of arsenical preparations, therefore it should not be used in many skin diseases as the tendency is liable to drift in that direction.

Effects on nervous system. It produces good results in all specific deposits in the brain or cord, which have not caused pressure degeneration. Also in many of the parasymphilitic conditions.

Its effects on paresis, advanced locomotor ataxia, and interstitial keratitis are disappointing and it is usually better not to use it in those cases, although some cases of ataxia have been markedly benefitted.

It should not be used in severe 1, cardio-vascular disease: 2, arterio-sclerosis (advanced) : 3, inflammations of the optic nerve; 4, severe organic changes from malignancy, etc.

Deaths. Up to the present time about fifteen deaths have resulted from the use of this wonderful remedy in over 40,000 injections. only two of which could be considered as dying from the drug, the rest being patients in insane asylums or in medical clinics where injections were given with the hope of prolonging life.

Conclusions.

I. A positive Wasserman is an indication for further treatment of salvarsan.

II. It should be used in conjunction with other forms of treatment, if not independent of them.

III. It seems the nearest to a specific of any treatment thus far advanced, for one of the greatest scourges effecting humanity.

IV. It should be controlled for two or three years with Wasserman at certain intervals.

V. It should not be used in degenerative nervous diseases, even due to syphilis, as it may not only not do good but may do harm.

VI. It should not be used as a diagnostic measure.

VII. More than one injection is usually necessary to render a negative reaction.

Discussion.

Wilbur S. Conkling, Des Moines: The Surgeon-General at the present time is issuing to all the surgeons of the army posts 606; and instead of discharging men who have syphilis they are curing them up. The surgeons at the camp at San Antonio reported that they were getting excellent results, keeping the men in the hospital until the lesion was gone, then returning them to duty and continuing the treatment with mercury in the arms.

T. B. Throckmorton, Chariton: I felt that the author of the paper has covered the ground so thoroughly, and in such a systematic and scientific manner, that there is little to be added to his paper; yet I believe it shows how some of the time-honored remedial measures of today may be practically relegated to the realms of obscurity to-morrow.

I wish to take the liberty of presenting before this society the salient facts in a case which came under my observation while I was resident physician in the Philadelphia Orthopedic Hospital and Infirmary for Nervous

Diseases. A man between the age of 35 and 40 years, with a distinct history of two luetic infections, with a resultant hemiplegia, probably gummatous in character, came under the care of Dr. S. Weir Mitchell, seeking relief. Although he had been properly treated by competent syphilographers, nevertheless the Wasserman, Noguchi and Butyric acid tests showed a marked positive reaction. At this time Ehrlich's drug was just being introduced into this country, and the question came up as to whether this case was one where it could be used with advantage. Dr. Mitchell hesitated somewhat, and sent men to the Rockefeller Institute of New York City to get data concerning the drug, its uses, and whether it would be applicable to this particular case. The report however was unfavorable, inasmuch as definite organic changes had taken place, and the physical condition of the patient was not such that it was considered safe to administer the drug. He was then put upon 5 minims of the colorless Fowler's solution in normal salt solution, hypodermically and the dose increased a drop daily until the drug was pushed to its point of tolerance. This was attained when the dose reached the maximum of 13 minims, as indicated by puffiness under the eyes and slight gastro-intestinal symptoms. The treatment was immediately withdrawn and the blood examined, which showed a marked decrease in the reaction for spirochete. As soon as the patient had recovered from the effects of his slight arsenical poisoning the treatment was again resumed, but slight poisoning was manifested before the dose reached the point of tolerance of the former time. The blood examination for the spirochete at this time was almost negative.

Dr. Mitchell stated that over thirty years ago there came under his observation a young man suffering from chorea in an aggravated form, the case being also complicated by an acute luetic infection. He put the young fellow upon heroic doses of Fowler's solution, and noticed that with the subsidence of the choreic manifestations there was also a subsidence of his luetic symptoms; but he had never once attributed the latter's disappearance to the effect of the arsenic preparation until Ehrlich introduced his "606" into this country; and the present case was one where Ehrlich's preparation could not be used, he thought arsenic in some form well worthy of a trial.

Unfortunately my time of service shortly expired, and I was not able to get further data concerning the outcome of this case, or others which perhaps may have come up later; nevertheless the thought arises in my mind as to whether the treatment used in this case, beginning with small doses of an arsenic preparation and increasing until the point of tolerance is reached, will produce permanent immunity from the spirochete, or whether there will be a relapse of the condition.

Dr. Weston: I want to thank the doctors for the kindly way in which they treated my paper; it is almost too kind! I expected some consideration in the way of discussion. I wanted some men's ideas about small doses and about large doses of salvarsan. In general, I think it has been considered that the administration of small doses over a long period of time is contra-indicated to establish an arsenical cure, because the triponosome gets accustomed to these doses of arsenic and becomes really what might be called an arsenic-immune triponosome and only large doses at certain intervals will cause its disappearance from the circulation. After these triponosomes become immune to the arsenical preparation there is no preparation that will affect them; they must be taken back to the mercurial treatment and later given another dose of arsenic. If you kill them all with one large dose then you have to wait a while to see if any more appear in the circulation, and then give them another large dose. That is now considered by men in this country and abroad as the most effective way of treating spirochete infection.

We recently sent to every local secretary blanks to be used in receipting for dues. These must be signed by the member when payment is made. The Journal must have these signed blanks before we can get mailing privileges to carry advertising. If the House of Delegates authorizes advertising, we want to be ready to begin July 1, 1912.

CONSERVATIVE NASAL SURGERY.*

FRED W. BAILEY, M. S. M. D., Cedar Rapids, Iowa.

During the past three years my attention has been repeatedly attracted by the seemingly wholesale sacrifice of certain tissues of the nasal cavities in patients operated upon for various nasal disorders. The resulting condition is in many cases of more annoyance than the primary trouble. These facts have suggested to me that it would be well to consider nasal surgery from a conservative standpoint.

Of nasal operations the largest per cent are on the inf. and mid. turbinates, those on the septum coming next. It is the tissues comprising the turbinates bones—the inferior and the middle as the superior is not operable—to which my remarks will chiefly refer.

It may hardly be necessary to mention that the physiological function of the tissue lining the nasal cavity is first, to secrete a mucous by means of which particles of dust and germs which are always present in the air may be removed from it; second, to moisten the inspired air and third, to warm the inspired air so it may at once be utilized by the air cells in the lungs. The turbinate bodies on account of their scroll shaped structure afford a large exposed mucus surface by means of which their physiological function is performed.

There is a rule laid down in surgery that it is best in any operation to preserve all the tissue possible. It seems to me that this rule applies almost twofold in operations pertaining to the nasal cavities, especially the turbinates.

I have had a considerable number of patients come to me for examination of the nose complaining of formation of scabs and crusts in the nose, of their nose and throat being continually dry and of recurring attacks of epistaxis. Some of these patients state that they have to get up in the night and use vaseline or an oil spray to moisten their nose in order that they may sleep.

Upon examination of these patients I find that they have undergone operations on their inferior turbinates and that the turbinated bodies have been removed, flush with the outer walls of the nasal cavities. The nose is thus deprived of a large surface of its lining and usually a condition simulating atrophic rhinitis is well advanced.

A number of times I have seen the same thing in children between the ages of six and fourteen who have had adenoids, tonsils and both turbinates from both sides of the nose removed under general anesthetic at one operation. It is hardly necessary to say that such a procedure as the above is and should be condemned by all reliable

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Section on Ophthalmology, Otology, Laryngology and Rhinology.

authorities. A child under the age of fifteen years, who has enlarged tonsils and adenoids has necessarily as a result of prolonged mouth breathing a contracted palatal arch which causes the lumen of the nostrils to be smaller than the normal. When the adenoids and tonsils are removed and nasal breathing is established the floor of the nose increases in width directly in proportion to the widening of the palatal arch and the turbinates gradually recede farther and farther from the septum until eventually a nearly normal condition is established by nature. The turbinates are in the nose for a definite purpose and it is time enough when a child has reached maturity to interfere with them surgically, if there be any need for it at all.

It is fair to say that not every person who presents himself to the rhinologists complaining of difficulty in breathing through the nose should necessarily have his turbinates removed or even trimmed. But often, if once in a rhinologists hands, such a patient in a few weeks time passes out of his hands minus two or more turbinates and instilled with the idea that he has had removed from his nose tumors or growths which nature never had intended him to possess.

Spurs should be removed when they obstruct free nasal breathing or when they cause pressure upon the adjacent turbinate tissue. Deviated septa should be corrected when they cause obstruction to nasal breathing or cause the current of inspired air to be deflected from the normal course.

Turbinates should as a rule be operated upon when they are hypertrophied to such an extent as to cause chronic interference with breathing through the nose, when they cause the patient to continually take colds, when they obstruct the free drainage of the accessory sinuses, when they cause reflex pressure symptoms and when they interfere with the pharyngeal opening of the Eustachian tube.

In all the above mentioned condition operative interference is justifiable but only enough tissue should be removed to do away with the trouble complained of. It is an easy matter to slip a scissor under an inferior turbinate, cut it close to the nasal wall anteriorly and then remove it in its entirety with a nasal snare. A large piece of bone and tissue is thus removed and when shown to the patient makes a great impression on him as to the enormity of his ailment and incidently the greatness of his attending surgeon.

It is a much more difficult matter to insert the turbinate scissors and cut in such a manner that only the free edge of the bone with the attached tissue is severed and then adjust the nasal snare so as to continue the incision in a straight line to the posterior end and thus remove the desired portion without undue tearing of the tissues. This procedure is in my estimation the only justifiable method to be practiced. The patient will not be shown nearly so large a "growth", but the surgeon can rest assured that he will obtain the results he is af-

ter if he is satisfied with good results alone. If the edge of the bone is severed in its entire length there will be no further tendency to further hypertrophy. By the shrinking and contracting caused by escharation the remaining tissue covering the turbinate will be much reduced in size and there will be no question as to the benefit the patient will receive.

All crushing, biting, or tearing instruments should be strictly avoided in operating upon the middle and inferior turbinates. A sharp scissors should be used, making the incision to include at least three fourths of the turbinate. The snare should be drawn so as to completely sever the tissue engaged in the loop, and not merely tightened around it and then jerked thus tearing and lacerating the tissue. The cleaner the cut the less liability to infection and extension of inflammation to adjacent parts. In over four hundred turbinate operations I have not had a single case with aural complications resulting in the rupture of the drum membrane or necessitating paracentesis.

In all cases of operation upon the inferior turbinates excepting where there is pus in the sinuses a gauze packing should be used. It is not necessary to pack the entire nasal cavity but merely anchor the pack in the middle meatus and then pack between the cut surface and the septum.

It is never advisable to do a turbinectomy on both sides of the nose at one sitting.

In every case possible the operation for turbinectomy should be performed in a hospital and if done in the office the patient should be removed at once to a nearby hospital and remain there for a few days at least.

A turbinectomy is strictly a local anesthetic operation. I have never yet been obliged to give any patient general anesthetic for such an operation. Patients of very nervous temperament occasionally faint during the course of the operation, but the nurse who holds the patient's head has been instructed to hold the patient firmly in an upright position and the operation is not interfered with in the least. Fainting is also encountered when a too strong solution of cocaine has been used. By using a two per cent solution and taking from fifteen minutes to a half hour to prepare the patient this can in most cases be avoided.

Of course exceptions must be made in operating upon malignant growths effecting the turbinates. In such cases it goes without saying that a great sacrifice of tissue must be made, removing not only the malignant growth but considerable of the adjacent tissue.

In conclusion I would say that in operating upon the nose where the removal of turbinate tissue is contemplated, let us consider carefully, first if it is really necessary that any tissue should be removed,

secondly, if it is necessary to remove any tissue, determine just how much should be removed. If after operating we find we have not removed enough tissue to get the desired result, it is simple matter to remove more at any time. Let us also remember that if we remove too much turbinate tissue there is no operation yet devised by which we can replace it.

Dr. Dean, Iowa City: I do not say I would think it proper to operate upon the turbinates of a child, but once in a while a case is necessary. A child of seven came to my office Saturday upon whom I expect to operate. He had the appearance of a child with adenoids. I told the mother that there was not very much use to look further. He had one of those peculiar mulberry growths on the post tip of the inferior turbinate. He had also all the ear marks of a child with adenoids. I expect to remove the post tip of the inferior turbinate. This is a case which I think demands it.

Dr. Harkness, Davenport: I agree with Dr. Bailey that we should be a little conservative in operating upon the turbinate tissue. When a case presents itself to us with the turbinates enlarged to a considerable extent, it seems that one should have no fear to use the knife. Dr. Bailey spoke about the hospital as being the place for these cases. Certainly the hospital is a very good place, but not always convenient. I have had patients come to the office, are operated and go home afterward, except when the patient is not in good health, then I think it advisable to go into the hospital for a day or so. The nose is such a plain cavity and if left alone the tissue will heal very readily. Operating upon the middle turbinate seems to be quite important. When I have a fear that I will be called in the night on a case that I have operated during the day. I pack the nose and thereby take precaution against a hemorrhage.

Dr. Windle: I am very much interested in Dr. Bailey's paper and the advice given is very good. It occurred to me while reading the paper that perhaps the general practitioner was a little bit too conservative and the specialist not conservative enough. A patient came to me for examination and removal of both of the turbinates. The case was referred to me with a large inferior turbinate, and with the appearance that a turbinotomy had been performed. I applied a little adrenalin and cocain, the turbinate reduced itself readily and quite sufficiently, so instead of doing a turbinotomy I applied treatment. It seems to me that we ought to use a little more judgment in our work upon the middle turbinates, the anterior portion of the middle turbinates, but to remove all adherent hypertrophied tissue and to open up the cavity to give free drainage to the frontal sinuses.

DIAGNOSIS IN OBSTETRICS.*

H. R. REYNOLDS, M. D., Clinton, Iowa.

The fresh graduate in medicine is apt to be a therapeutic optimist, due to thorough drill in physiological action of drugs until the thought of their exhibition is naturally followed by the expectation of corresponding results. When he encounters the disappointment of unlooked for results due to individual variations, he is quite apt to swing to the opposite extreme and become a therapeutic pessimist. Finally he sees what he did not fully appreciate in school, that diagnosis is the real essential foundation of his work and that from the exercise and perfecting of this art, he derives the greatest benefit.

Early medicine was empirical and early surgery was largely

*Read before the Second District Society, Oct., 1911.

mechanical. Later, the increase of general knowledge brought an increase of medical learning and with secret and later, open dissection, a foundation was laid for rational study along etiological lines.

Surgery seems to have made the most brilliant use of diagnostic measures, and medicine, less spectacular perhaps, has very substantial progress to its credit through the same agencies.

The branch of the medical art which has apparently benefitted least in this regard, is obstetrics. True, the Vienna School and masters in our own country have attained great refinement and brought about great progress during the last twenty years, but the rank and file of practitioners do not, in so far at least as my own experience, and the reported experience of others has shown, utilize to the extent readily possible, the results of this advance in obstetrical science.

The average physician in city, town or country practice finds himself on at least a speaking acquaintance with opsonins and antibodies, and keeps in touch with advances in surgical technique; but can we say as much for his interest in obstetrics?

The idea of this paper is not to use these facts, or suppositions as they may be, as a hostile criticism in any sense, but as the basis of a plea for the more earnest and intelligent consideration by all of us, of certain conditions and problems arising in every day obstetrical work. Upon those men and women to whom are entrusted the care of the pregnant woman and the new born babe, devolves a large responsibility, not alone for immediate results, but also in the way of prevention of future trouble. Among physicians of a few decades ago, and probably little less at the present time, the act of childbirth was considered as a largely natural, and relatively unimportant event. From talking with other physicians, from reading, and in a small part from personal observation, the writer is impelled to the belief that now-a-days, complications are more frequent than of old, due to what may be termed the deformities of civilization and to be the lowered muscular tone and lessened capacity for endurance of pain, for which civilization is also largely to blame through the more luxurious trend of modern life. If such is the case, surely the striving for a labor which shall leave a woman in as good condition as before parturition, and produce a child unhandicapped in its struggle for existence, is a task which may well employ all diagnostic methods.

Aside from the humanitarian and scientific aspects of the subject, the one who tries to do work which is not merely good enough, but the best of which he is capable, has a sense of professional pride and a glow of personal satisfaction which is worth the effort. Not in a didactic sense but to stimulate discussion and interest, let us look at some of the conditions which cause abnormalities in preg-

nancy and labor. Nausea, Bright's disease, cardiac, tubercular, vascular and mental diseases, both organic and functional, eclampsia and general asthenic conditions are those which earliest demand our attention. Later, contracted pelvis, abnormal insertion of the placenta and the avoidance of sepsis are to be considered. Accidents of labor, complications during the puerperium and some diseases of the new born child, sums up a list of dangers not necessarily complete, but sufficient to show what may confront us. The diagnosis of the fact of pregnancy does not enter the scope of this paper.

As in any case, the family history as well as the previous history if any, of former labors, cannot be neglected, as for instance the condition of contracted pelvis is known to be hereditary.

Statements as to former illnesses should be carefully elicited, that the influence of tendency to tubercular, or other ailments as noted above, may be properly estimated, special attention paid and examinations made as needed. The examination of the urine is probably made more or less as a matter of routine but when the absence of sugar and albumin has been ascertained, we are apt to be satisfied and to feel that the requirements have been met. The occurrence of eclampsia in patients with non-albuminous urine shows however, that further inquiry should be made, especially when mild toxemic symptoms arise, such as nausea and headache. An estimation of the nitrogenous output places us in possession of facts more important to the patient than the mere presence of albumin, as we have all seen women with apparently grave kidney lesions, pass through a good labor and puerperium, and as we know further that the condition called the kidney of pregnancy occurs in the later stages of many normal pregnancies.

In those cases in which sugar or albumin are found, further search must be made. Is the glycosuria due to true diabetic condition, and is acetone present, or is the condition due to dietetic causes or functional nervous disturbances? Is the albumin caused by destruction of kidney tissue, are casts present, or is it serum albumin? These questions can only be answered by an examination much more extensive than is usual.

Mental disturbances may arise at any time during pregnancy or the puerperium, and for their early discovery some observation of the patient is requisite; also the influence of a few casual calls by the physician keeps any pregnant woman more cheerful and sanguine.

Occasionally varicose conditions of the veins come to our notice, the discomforts of which can be lessened, and possibly alarming sequellae in the way of embolism may be avoided.

Diseased conditions of the heart are of course observed in pregnant women as in others, but the hypertrophy normal at this time

in the left ventricle seems to be sufficient in most cases to compensate, even when chloroform becomes necessary in the labor.

Sometimes a woman shows during her pregnancy that her muscular strength is insufficient for the task before her; here again frequent observation by the physician gives opportunity for the exhibition of his skill and judgment in bringing about a successful labor.

One of the dreaded visions of the obstetrician is placenta previa, partial or complete. Here the important symptom is the hemorrhage, which may not show itself until dilatation begins, or may follow the sudden assumption of the erect position or any other sudden movement, generally in the later months of pregnancy. Confirmation of the presumptive diagnosis may be had on internal examination, and in this connection an exploration of the lower segment of the uterus following a sudden gush of blood, which occurs too early in labor to be traceable to a cervical tear, may furnish evidence of an hitherto unsuspected marginal or lateral implantation, with its consequent bearing upon asphyxia of the child.

Foremost among accidents of labor endangering the mother is that other dread bogey, post-partum hemorrhage. Here the earliest and the one important symptom is the small rapid pulse, with sudden faintness and yawning and finally the discharge of blood; this mentioned last, because the extinct hemorrhage may be for some time unnoticed.

Rupture of the uterine wall is of course recognized when a small fetal part following intense expulsive pains, becomes suddenly apparent just beneath the abdominal wall; the time to know of such a rupture is, to use an Hibernicism, before it occurs. This may be suspected when there are increasingly violent ineffectual pains, with the upper part of the womb very hard, apparently separated from the lower more relaxed and thinned out part, by a band or ring. A rapid and failing pulse accompanies this stage.

Diagnosis of septic conditions in puerperal cases seems to be largely a matter of a careful and conscientious review of the labor, exploration for possible infection atriæ, and the elimination of other factors causative of rise in temperature, etc.

In considering disease of the new born child, the most prominent is perhaps asphyxia—where the distinction is to be made between livid and pallid conditions.

Recognition and differential diagnosis of syphilis is very important in this connection. Possibly more children are born cursed with this blight than we are really aware, or willing to admit. Here one needs to be very sure of his ground, for obvious reasons, though the pallid senile face, the coryza and the skin eruption when all are present, form a picture hard to disguise or overlook.

One topic has been purposely left for the closing paragraphs of

this paper, for the reason that its consideration brings up the question of the practical utility of the pelvimeter as a means of estimating, prior to the labor, the probability of a bony canal of normal dimensions. The writer does not feel that his limited experience would enable him to give an opinion of any worth upon the matter. Men of national reputation fail to agree as to whether pelvimetry is useless or indispensable. Few claim that it is infallible. Cases can be cited where abnormal measurements were present in women who had uneventful and easy deliveries; and vice versa, where pelvic measurements were normal, labor was slow and hard. Until the fetal diameters can be measured before labor and compared, the pelvic measures would seem to be limited in their value; however any method offering advance in diagnosis is worthy of trial and the writer expects to continue its use, hoping for benefit therefrom.

In these pages, diagnosis may seem to have been extremely sketchy and insufficient. Personal limitations as well as lack of space denies to a paper of this kind, the full and exhaustive covering of such a vast subject as obstetrics. As was pointed out in the opening sentences, the object of the writer was to enter a plea for more careful consideration of the problems in this field, and for the raising of this branch of practice out of the easy going routine into which we are all liable to allow it to lapse.

THE SURGICAL TREATMENT OF ACUTE ARTICULAR RHEUMATISM.*

A. M. POND, M. D., Dubuque, Iowa.

The word rheumatism comes down from the Greek word *Reo* (I flow) and is an example of one of the oldest traditions reflected in modern medicine.

The ancient idea of this morbid process was that it proceeded from the flow of spoiled fluids of the brain down through the different tissue of the body and by reason of the toxic condition of this discharge produces the pain, swelling, redness, heat and diminished motion so conspicuous in joint infections. The "calor, rubor, dolor, tumor, et functio laesa" of the early medical classics easily applies to the conditions found in these joint diseases.

The term "rheumatism" or rheumatic joint in ordinary medical descriptions may mean anything from tuberculosis of a joint to flat foot—in other words the term rheumatism is not sufficiently definite or descriptive.

The conditions under discussion at this time must be clearly defined and properly classified before analytical consideration of them can be undertaken.

*Read before the Des Moines Valley Medical Society, 1911.

The typical case of acute articular rheumatism begins with nasopharyngeal, tonsillar, bronchial or urethral infection, although this may be so slight as to escape attention or to be considered in any way a causative factor, unless it should perchance be the latter, however in nearly every case of acute articular inflammation a history can be obtained of a preceeding "catarrh" or involvement of one of the foregoing membranes.

The period of incubation seems to be reasonably fixed, for in from ten days to three weeks after the "catarrhal" attack there is usually a pain in a joint which presents a large synovial surface, usually the ankle, knee, elbow or shoulder.

This pain is either preceeded or followed by a chill, then in a short time a rise in temperature which remains elevated for a few days, accompanied by profuse and debilitating sweats usually occurring at night; the first joint invaded becomes first painful, then swollen, red and tense, the slightest motion or jar causes excruciating pain, which is obstinately unaffected or relieved by the treatment. In a few days this joint subsides as another joint usually on the opposite side of the body begins, and this alteration of joint involvement begins its tedious, debilitating and painful course, only to end in a possible deformity of body or permanent impairment of the heart, especially in the serous joint and cardiac involvements so common in childhood.

The modern student of surgical pathology has been repeatedly impressed by the similarity of the clinical course of rheumatic joint affections and the conditions noted in joint infection where the infective agent was isolated and identified.

Achalme in 1891 described an organism anerobic in character and morphologically allied to the streptococcus. In 1897 Thiroloix succeeded in growing this organism. G. Rosenthal repeated his experience with this bacillus at the Budapest Congress in 1909 and recites that he has been able to produce analogous conditions in the joints of young pigs, calves and monkeys.

Thiroloix and Rosenthal have done sufficient work along this line to be convinced that this organism presents two varieties varying in character as well as differing in effect; one type, the bacillus profringress may be transformed until it resembles the organism described by Thiercelin.

Wasserman has described a diplococcus which he calls the micrococcus rheumaticus, this has been isolated from the throat, joints and exudates in persons suffering with acute articular rheumatism. The same organism has been isolated in England by Poynton, Payne, Walker, Shaw and Beattie. Poynton and Payne have injected this organism into rabbits and produced endocarditis and arthritis.

Cole working in Oslers clinic failed to get these results with the

diplococcus, but did succeed in producing experimentally endocarditis and arthritis by injecting strains of the streptococcus into rabbits and guinea pigs.

No doubt some of the forms of the staphylococcus enters also into the bacteriology of these joint involvements. Just why these organisms are sufficient to cause an extensive inflammation of the joint surface and in some cases produce an erosion of the surfaces and then stop short of the production of pus can be explained only in two ways; first—that the diplococcus of Wasserman or the streptococcal form of bacillus of Achalmé had suffered attenuation or some altered virulence during the acute catarrhal process in the nasopharynx, tonsils, etc., so that there were not sufficient hemic anti-bodies elaborated, or second—that the bactericidal properties of the blood during the acute catarrhal process had been so modified or expended that the virulence of the micro-organisms was not sufficiently combatted by either the phagocytic activity of the leucocytes or the elaborated antibodies, or that there was a membrane tolerating and perhaps elaborating the microorganisms which produce continuous dose of toxins into the circulating blood.

It is reasonably certain that the modification of virulence is to be explained either by some unusual resistance of the blood which carries this infection to the remote joints or that the infective agents themselves have suffered alteration during the acute catarrhal process.

A noticeable feature of these infections is the selection of serous surfaces as a favorable site of invasion. Roswell Park called attention to this fact in 1891. That the capsule of a joint invites this invasion by reason of its usual poor resistance offered on account of lessened blood supply, or that the synovial surfaces and possibly the synovial fluid attracts these micro-organisms from the blood by reason of some favorable culture conditions, and by increased tension of the fibrous inelastic capsule forces this elaboration into the circulation seems reasonably certain.

The fluid aspirated from an infected joint is serous in character and contains floculi of the dead bodies of polymorphonuclear leucocytes but rarely pyogenic organisms, although Poynton and Payne above referred to were able to grow micrococci from the aspirated fluid of invaded joints.

The changes observed in the affected joints are strikingly similar to the conditions noted in septic infections of these surfaces.

The synovial membranes are hyperemic and sometimes thickened and erosion of the articulating cartilages not infrequently occur. The layer of protective endothelium in the synovium is engorged and the area immediately surrounding this, the peri-articular membrane is tense. This latter is of fibrous tissue and non-elastic and the in-

creased tension of the joint space caused by the swollen turgid membranes together with an increased amount of altered synovial fluid puts it on the stretch causing the swelling and pain and limits the motion and also brings the inflamed articular surfaces of the joint constantly together exerting a degree of pressure that holds an exact relation to the degree of tension.

As stated above the synovial fluid is greatly increased and contains floculi composed of dead polymorphonuclear leucocytes. This condition is also noted in the septic involvement of joints.

The cardiac evidences of this obvious infection seems to be more common in children while the severity of joint lesions are more common in adults.

Dunn (Am. Jour. Med. Science Vol. CXXXVI-66) reports a careful analysis of 223 cases occurring in children as follows: Fever and arthritis 88 cases; fever, arthritis and cardiac involvements 25 cases; fever only 18 cases; fever and sore throat 6 cases; fever and chovia 1; unknown 3. He also gives interesting data concerning the length of time the disease runs in different conditions, arthritis only 4 days, endocarditis 12 days, pericarditis 39 days.

Thus it is obvious that there is a decided difference in the period of the course of this infection, which is no doubt explained by the resistance offered by the ability of the blood to produce bactericidal elements or by the lessened virulence of the infection by reason of the defense offered at the initial or catarrhal invasion.

The statement that this infection is hemogenic needs no argument. The endocardium is frequently involved and the chordae tendineae seriously impaired if not permanently damaged. Remote results of the endocardial involvements such as thrombosis are not rare and occasionally gangrene results.

Wm. Hessert reports a case of thrombosis following endocarditis for which it was necessary to remove the limb.

Pericarditis according to Dunn's tables appears to be the most severe: cases in which endocarditis was present averaged a period of 12 days while cases of pericarditis continued on an average of 39 days. It is my opinion that endocarditis always precedes an infection of the pericardium. With the involvement of the pericardium there occurs an increase of the fluid contained in the sac, and this increase at times becomes so great as to put the pouch on the stretch, and it being inelastic the pressure of the increased amount of fluid seriously limits and obstructs the normal function of the heart. The ventricles especially are effected, the volume of the blood entering the heart is not diminished, but the space permitting a normal filling of the ventricles is very materially lessened producing a damaging strain on the already inflamed valves of the heart, which if continued results in a permanent disability. The whole process

reduces itself to a problem of hydrostatic pressure. Working in an unaffected pericardium the heart has a certain capacity which is governed by the amount of blood entering the organ on the one hand and the degree of distensibility of the heart on the other hand. If the distensibility of the heart is materially lessened by an increase of the fluid contained in the nonelastic pericardium the capacity of the heart is lessened and its hydrostatic displacement is diminished in proportion to the amount of fluid occupying the pericardium.

This condition of the tense pericardium and the similarity to the state of affairs existing in the joints is striking, both membranes are inelastic, each is lined with an endothelium and in both conditions the amount of fluid contained in the cavity is greatly increased, producing their serious results in exactly the same way, viz, by increasing the cavity pressure. The similarity can be carried still further.

The character of the fluid in the pericardium is serous, abounds in albumen and contains flocculi composed of the dead bodies of the polymorphonuclear leucocytes.

As stated early in this contribution the term rheumatism may mean almost any condition which gives a history of a pain in a joint.

Thus an acute involvement of the lower limbs, especially the knees and ankles may be so painful and tender, coming on abruptly without any prodromal catarrhal invasion, as to compel confinement to bed, there is slight or no swelling, perhaps a very slight rise in temperature without any preceeding or following chill, and a diagnosis of rheumatism is reasonably certain. However this state subsides as abruptly as it began and when the pain is gone the patient may be up and about. In walking however there is noticed a peculiar flinging of the limbs below the knee and the foot comes to the ground with a slap striking the heel conspicuously hard. His gait has suddenly become ataxic and tabes is now cleared out of diagnostic confusion. But many of these cases are diagnosticated rheumatism because the term rheumatism is applied indiscriminately to any joint or bone involvement.

Rheumatism of one joint especially the knee, can be ascribed to an osteomyelitis with comparative safety and without danger of frequent error, the septic process of the bone causes an engorgement of the periosteum the pain of which is not infrequently referred to the nearest joint and in this state we find the chill followed by fever, the exhausting sweats, the anemia and most of the symptoms of acute articular rheumatism.

The enormous increase of the leucocytes and the intense unbearable pains produced by moderate continued pressure on the bone will serve to clear the diagnosis, but more important than either of

the foregoing points is the feature of the greatest importance, namely the involvement of one joint.

We should be disappointed indeed if syphilis failed to obscure our diagnosis in this condition. Tertiary syphilis may simulate acute articular rheumatism more closely than any other condition producing as is common syphilitic periostitis. A carefully taken history aided if necessary by an X-ray should satisfactorily clear the diagnosis from error.

Chronic arthritis or arthritis deformans begins without the chill, pyrexia, disabling pain or heat and swelling as incident to the acute articular processes. Furthermore chronic arthritis has wholly to do with the cartilages and the damage to the peri-articular structures, while acute articular rheumatism involves the synovium and the pain, limited motion and swelling is the result of an effusion into the inelastic fibrous joint capsule.

Joint pain of a temporary character may follow the passage of a urethral sound or catheter, and usually very promptly subsides, but if it should not, it is perfectly reasonable to suppose that the slight trauma to the urethra has excited a latent or dormant gonorrhea into activity.

Such joint cases in which pains persist always give a history of a previous gonorrhea. All the eruptive fevers and not infrequently typhoid manifest acute joint symptoms at some time during this course but seldom continue after the subsidence of the eruptive stage.

The joint pains incident to a broken plantar arch, or flat foot, occur without fever or swelling. Muscular rheumatism presents no swollen joints and is unaccompanied by any systemic disturbance. And now we must object to the term acute articular rheumatism applied to the condition under discussion. Any nomenclature which permits of such obvious confusion in the identification of a pathological process so distinctly characteristic is misleading and inefficient. This condition is always due to an infection of a mucous membrane namely aural, teeth, etc., naso-pharynx, tonsil, bronchial or urethral.

The infection of the naso-pharynx and bronchi are no doubt harbored and elaborated in the tonsil and from there gain entrance to the blood. The infections of the urethra are notoriously hard to combat on account of the crypts or pockets of that membrane, and these micro-organisms are tolerated, increased and finally passed on to the circulation after the acute gonorrhea has entirely subsided and the patient dismissed as cured.

The foregoing statement is supported by the work of the following observers: Wirgman and Turner (*Lancet*. Dec.) report 8 cases of acute articular rheumatism which were accompanied by pyorrhea and the infection of the gingival bodies, all of the cases were cured

by treatment of the teeth. Kess (Med. Klin. Berlin Nov., 1909) and Gurich and Schichold (Munchener Med. Wach. Feb. 8, 1910) found pus in the tonsil accompanying articular rheumatism, the removal of the tonsil secured pus in measurable quantities and was followed by relief of symptoms in 98 out of 125 cases.

It is interesting to know that many of these tonsils appeared perfectly normal and it was not until the tonsil was separated from the anterior pillar that any hyperemia was noted or the escape of pus observed.

M. Senator (Med. Klin. Berlin Feb. 8, 1910) noted an acute articular rheumatism concomittant with an infection of a nasal mucosa incident upon a surgical operation.

Weill (Press Medicale May 10-10) and Clemmers (Asch. Ped. May 10-10) have noticed an enlargement of the thyroid in these acute joint infections varying in time of appearance and degree of enlargement but accompanying cardiac disturbances with remarkable resistance to treatment.

In the light of such positive knowledge of the etiology and character of this infection it seems opportune to give to it the distinction it merits, by applying a more descriptive name than the word rheumatism conveys.

This is always a secondary infection, secondary to the involvement of the mucous membranes above mentioned and manifests itself chiefly in the synovial and peri-articular surfaces of joints and it would seem that the term secondary infective arthritis would comply to all the requirements of etymology in this instance, and would be vastly preferable to the older and more ambiguous and misleading term of rheumatism.

The symptoms may be classified under four distinct heads: 1, invasion; 2, elaboration and period of hemic introduction; 3, period of joint involvement and 4, period of cardiac involvement. The most serious cases occur during childhood and at this age infections of the naso-pharynx and mouth are most likely to occur. The attack provoking the secondary infection may not be the first one, in fact it is altogether probable that the tonsil has suffered structural damage during a previous attack and that the infection becomes hemogenic by reason of the altered tonsil which permits micro-organisms to be harbored in the deep follicles and thus gain entrance into the general circulation. The subsequent inflammation of the tonsils may be insignificant so that no importance is attached to it and still supply enough blood to these organs to materially elaborate and increase the toxins of the imprisoned bacteria.

The role that diseased teeth and gums play in this primary infection must not be overlooked. Oral infections are carried to the tonsil, which if they are normal act as a barrier to the system but if they

are crippled they become the commonest portal of systemic infections.

The importance of a thorough examination of the condition of the gums and teeth as well as of the tonsil cannot be overestimated in locating the source of invasion. If there is no evidence of attributal cause in the mouth, a history should be taken concerning gonorrhea and this is not always easy to obtain. Men who have suffered urethral infection will frequently deny it and women may be the innocent sufferers from gonorrheal infection and not know the true nature of the trouble, as many of the joint infections occur after the urethral infection has subsided. Perhaps the best way to clear the diagnosis is either by opsonic examination or by the use of the gonococcic vaccine.

Successful treatment depends upon the identification of the infection so far as gonorrhea is concerned, for if gonorrhea can be eliminated as the cause, the treatment will be simple, prompt and effective whereas if the joint infection is secondary to the urethral infection the course will be prolonged and more likely to relapses until the urethra ceases to be the incubator of the infection.

The primary infection is followed by a period of apparent recovery, the tonsils have decreased in size and all inflammatory evidence has disappeared or in the case of urethral invasion the gonorrhea or rather the discharge of urethral pus has ceased. It is during this period of apparent convalescence and quiescence that the infection passes into the general circulation from the crippled tonsil or the pocketed urethra.

The toxic agents in the blood are of modified virulence or the blood is reinforced against them to a degree so that portions of the body generously supplied with circulation escaped the active result of the infection. The synovial surfaces throughout the body are not generously supplied with circulation and the fluid contained in these membranes is serous in character abounding in albuminous material supplied with the body heat and protected from serious disturbance, and thus by reason of anatomical and physiological conditions invite these micro-organisms by reason of favorable culture conditions.

It requires from 10 to 21 days for the joints to manifest the result of this secondary infection.

The synovial surfaces of all the joints are protected and surrounded by a tough inelastic fibrous capsule. The invasion of the synovial sac is accompanied by a hyperemia which is followed by an increase production of the secreted fluid together with flocculi composed of the dead bodies of polymorphonuclear leucocytes that have perished in the conflict of defense. This increased fluid puts the joint cavity on the stretch and forces the toxins into the circulation. The presence of the toxins produces the chills, fever and the profuse

sweats that are so common in infection. The joint becomes hot, painful, red and swollen and the slightest motion is attended by severe pain. After one joint or region of the body has become sufficiently inflamed there is enough blood forced into the meagre supply of the part to overcome the local infection and it subsides here only to appear in some other locality, either by reason of some trauma or lower resistance. This process of combat is very expensive to the blood and a rapid and sometimes grave anemia is usually observed.

The endocarditis and pericarditis are more constantly noted in the cases occurring in childhood, the adult seems to possess resistance that holds in check the infection or completely overwhelms it, although nearly every case of acute joint infection is accompanied by some degree of endocarditis.

The pericardium is apparently the last of the chain of symptoms to appear. The power of the infection is usually expended before the pericardium is invaded. However it is quite common and adds a serious gravity to the condition of the patient, and it is more persistent by reason of the fact that it is not so promptly drained by the natural processes.

The tendency for these acute articular attacks to recur is due to the fact that the source of this secondary infection is not destroyed or removed. Just as often as a crippled tonsil becomes inflamed or a gonococcic laden urethra excited to activity these acute lesions may be noted occurring in a few days after the acute processes have subsided.

The line of treatment which undertakes the permanent cure of this condition must presume, 1st, the obliteration of the port of entry of the infection, 2. prevention of extension, 3. increase resistance. Attention to the gums, tonsils, nose, throat and bronchus may clear up the cause. The infections of the mouth, nose and pharynx are usually focused in the tonsil, which if it is disabled, permits ready access to the circulation. If not found in the upper respiratory tract, the urethra should be inspected and if necessary the gonococcic vaccine employed to excite a latent gonorrhea into an acute exacerbation and perhaps it will require an opsonic examination before the identity of the gonococcic infection can be positively made. The source must be found before treatment is begun.

In case of pyorrhea or gingivitis or other inflammatory condition of the teeth or gums the dentist should have supervision of the local treatment but the tonsils should be carefully inspected and separated from the anterior pillar because that portion is the commonest site of the residual infection following the acute attack. Deep follicles or reticulæ are the direct result of a damaging infection which has left a crippled tonsil and as such is the most dangerous and commonest source of infection into the circulation.

A tonsil which shows structural damage as a result of infection should always be promptly removed and if perchance this damaged tonsil has been co-incident to recurring attacks of acute articular rheumatism, it will be observed that these joints do not become involved. In the case of gonorrheal joints the urethra requires the attention.

The first important element in treatment is the identity of the source of infection. If it be the tonsil, remove it. If the urethra, drain it, and give gonococcic serum.

If the joint is swollen tender and inflamed and motion limited two courses are open. Venous stasis as recommended by Bier will frequently relieve pain and be followed by an immediate subsidence of the distressing symptoms with a decline of temperature and cessation of the profuse sweats. If this should not be followed by relief in 48 hours the joint may be aspirated and a few cc of fluid removed which relieves the tension and lessens the pressure which forces the toxins again into the circulation. Before removing the aspirating needle, the syringe should be removed and about 2 cc of sol. of formalin in glycerine 2 per cent should be injected into the joint cavity. Caution should be taken that formalin solution should be at least 24 hours old before using, or it will be so irritative that the function of the joint may be destroyed if the first joint invaded be aspirated the extension can be prevented and the attack abated.

Murphy (Am. Med. Assn.) states that this solution increases the resistance of the blood by rapidly increasing the polymorphonuclear leucocytes.

The removal of more of the excess synovial fluid than is replaced by the formalin glycerine solution, the capsular tension is relieved and the pain subsides and motion is possible.

The peculiar anatomical features of the joint invaded will largely determine the choice of treatment, types of multiple joint have no large single synovium hence the best results are obtained by the venous stasis treatment. The bandage is put on just below the knee in case of ankle involvement and just below the elbow where the wrist is inflamed, and is applied only tight enough to cause an obstruction to the surface veins and slow the blood stream. Care should be taken not to obstruct the arterial circulation, and this can be determined by the presence and quality of the pulse. The limb will swell to varying degrees; and the pulse should be found, volume and character noted at intervals after the bandage is applied, else the swelling below the constriction may obliterate the arteries and the application of the bandage be followed by pain instead of prompt relief.

Properly applied, the pain promptly subsides and in a short time the temperature declines, the pulse lessens in frequency and the

sweats diminish. It is not wise to let it remain on for a long time at the beginning; best results are noted in cases where the bandage is on for one hour in the morning repeated in the afternoon and again in the night if required; the time of application is increased by 30 minutes each day until the whole amounts to about 8 hours. Gonorrheal cases are especially benefitted by the Bier treatment.

Joints like the knee, elbow, shoulder and some times the hip are best treated by aspiration of joint fluid and the injection of a less amount of glycerin formalin, after which gentle traction or extension should be employed until the active inflammatory processes have subsided. The hip joint frequently presents serious difficulty by reason of the anatomical protection afforded the joint cavity. However when involved to a point of external evidence viz. swelling, heat, redness and pain. The joint cavity may be reached by aspiration at the middle of a line drawn from the ischium to the upper margin of the greater trochanter.

The most serious stage of this whole infective process is that stage where cardiac involvement begins. The heart is usually the last site to become infected and the results here are much more serious by reason of the frequency of permanent disability resulting. Children are the most frequent sufferers and I certainly believe that if the treatment outlined in the foregoing be promptly begun at the first joint showing involvement, that this infection can be combated and the serious heart features prevented.

When however, the pericardium is distended and cyanosis and dyspnea are present; drainage of the heart sac is clearly indicated.

The usual procedure of aspiration of the distended pericardium is not all that one could desire. It empties the sac but does not prevent its refilling. Aspiration is not always safe because the point of the needle is not guided, it is plunged in where the sac is supposed to be. If it penetrates the sac only all is well but the danger of heart injury is great. Exposure of the heart sac and drainage is much to be preferred. An incision down the center of the sternum from about the fourth or fifth insertion and continuing at right angles on the surface of the sixth rib is made, the perichondrium is separated from the bone and a segment, 1-2 in. of the cartilaginous portion of the sixth rib removed. The posterior sternal ligament is thus exposed and usually the internal mammary artery. The artery may be retracted inward or ligated as required. Separating the fibers of the posterior sternal ligament exposes the glistening, tense surface of the pericardium. Gauze is placed by forceps up to the sac and if possible below its margin to protect the leakage of the fluid. The sac is opened by a stab and a small tube placed in the incision. The tube may or may not be sutured in place. If desirable or deemed necessary to continue drainage the tube may be sewed with fine catgut to the

pericardium. In a day or two the catgut will be soft enough to permit of easy removal. Drainage of the pericardium is followed by prompt respiratory and circulatory relief and usually normal temperature and freedom from joint pain in a few hours.

To summarize the treatment we conclude as follows: Primary infections of the lymphoid structure of the naso-pharynx is the commonest cause of these hematogenous joints infections. Latent gonorrhea as a cause takes second place. The identity of the infection must be determined. If naso-pharyngeal, remove crippled tonsils, or hypertrophied adenoids, then look after the teeth. If gonorrheal treat patient with the gonococcic vaccine.

Apply the principles of venous stasis as outlined by Bier, but if relief is not promptly afforded, aspirate joint and inject the 2 per cent formalin solution in glycerine which is at least twenty-four hours old, in a smaller quantity than the amount of joint contents removed. Fix the leg in moderate extension and allow rest. If the infection has gone to a point of heart involvement, incise and drain the pericardium to prevent the permanent damage to the valves.

In the majority of cases attention to the joints when first involved together with the search for primary infection with the proper treatment of tonsils, adenoids and teeth or urethra will give immediate relief and prevent the most serious phase of this clinical picture and save the heart from structural damage and the patient from a life of invalidism.

SMALLPOX, REPORT OF AN EPIDEMIC IN JEFFERSON COUNTY.*

P. J. SHERLOCK, M. D., Lockridge, Iowa.

Gentlemen: Your secretary in view of our recent epidemic of small-pox has asked me, to prepare something on this disease. I do not intend to weary you with a scientific discussion of the same. It is not my intention to deal with the etiological factors, nor the therapeutic management of small-pox. My intention in this paper is to tell the exact conditions which existed in our township, and the conclusions I have come to, in regard to the management of an epidemic of the disease; I will first give you a short retrospective history of the epidemic. A traveling man from our town, was taken sick at the Illinois State Fair last fall, he had been vaccinated when a child, and no noticeable eruptions ever appeared.

Shortly afterwards while still sick, he came home to Lockridge and never consulted a physician. Twelve days after his arrival one of his children was taken sick. The child presented the ordinary symptoms of some febrile attack. On the second day the child was

*Read before Jefferson County Society, Jan. 26, 1912.

better, and I never saw him afterwards. The mother says the child had an eruption on the third day, but they did not mention it for they thought it amounted to nothing; shortly afterwards another child in the same family was taken sick, and on this child I saw the eruption, and pronounced the disease chicken-pox. In about two weeks I noticed that I was not feeling very well myself. After passing through the initial four days of sickness I felt better, and on the fourth day an eruption appeared. I immediately supposed I had chicken-pox, as I had no recollection of ever having had the disease, and my case was diagnosed by a very capable physician. I even made several calls while in the eruptive stage. Here I want to say that when attempting to diagnose a case, it makes some difference which end of the thermometer you are on. The eruption kept getting worse, so that on the third day of the eruption I placed myself in quarantine, and remained there for twelve days. While in quarantine I got reports that more cases were appearing among the adults of the community. This caused me to view the disease with suspicion. Coming to Fairfield I consulted a physician, and he pronounced my disease small-pox. Then the problem of putting down this epidemic arose.

There were then thirty cases unquarantined. Vaccination was something many were opposed to, and consequently the population was largely unprotected.

A quarantine of homes was established, but the disease continued to spread in spite of our quarantine. In the meantime we had talked vaccination, and were permitted to vaccinate some of the unvaccinated in the community. The quarantine which we established did not prevent the spread of the disease, and by the first of January, 1912, one hundred and nine cases had appeared in our small village and immediate vicinity, besides many which were concealed.

Here I wish to introduce some figures. Taking the village and immediate vicinity, containing a population of 220, there arose 109 cases. Of the entire population 98 were vaccinated, either at the time or previously and 9 had had the disease previously. Of those escaping the disease, 86 were vaccinated and 9 were protected by having had the disease, of the entire number of cases, only twelve arose which had been previously vaccinated; 4 of these vaccinations were performed over 30 years, three over 40 and 5 over fifteen years ago. Among the entire population, only 17 are left who are unprotected either by the disease or vaccination. Thus it can be seen out of the total population 92 percent either had the disease or were protected by vaccination. Most of the previous vaccinations were in the foreign born, who had been vaccinated in the old country in infancy before coming to America. It was really remarkable the number of these vaccinations which protected. I counted 35 vaccinations performed over 40 years ago. Three cases arose among these people.

Perhaps some of them had varioloid which was not mentioned, but still the immunity which these people showed was surprising to me. And I will also add, that in the village or immediate vicinity, you cannot find a man, woman or child, who has not been exposed to a greater or less degree. The reason that the epidemic subsided is apparent. We ran out of people to have the disease. If we had the unprotected people we would still have small-pox.

The cases were of a very mild type, and in one particular case a single pock was the extent of the eruption. In 2 cases no eruption was ever found. As the disease spread the cases seemed to get more severe and after 2 very severe cases had arisen the number of vaccinations increased remarkably. After January 1st no new cases arose, or at least none were reported.

I intend now to leave out any lengthy discussion I might make on the symptomatology or treatment of small-pox and pass onto a few general remarks on the management of the epidemic by quarantine.

However I will briefly consider the symptomatology. In our epidemic, there were no text book cases, out of the entire number only 20 per cent developed a characteristic eruption, which could not be mistaken for something else. As to initial symptoms the febrile period varied from a few hours up to several days. The most constant symptoms were headache and lumbar pain. The lumbar pain was the most constant of all the symptoms and nearly every case among the adults presented this symptom.

As to treatment we all know it is entirely symptomatic. During the initial stage an ice cap to the head, and cold sponging for the fever, with phenacetin for the severe headache was the extent of the treatment. During the eruptive stage the patients all complained of soreness of the mouth and throat. Simple alkaline mouth washes, with pellets of ice allowed to melt in the mouth slowly, usually gave relief. One point of interest may be mentioned. Out of all the cases only two developed the maniacal symptoms. These patients were unable to sleep and exhibited a wild expression of the countenance. It was found after using bromids, and chloral, that our old friend morphine given to the extent of 1-2 to 3-4 grains in twenty four hours quieted the mental excitement and the patients awoke refreshed.

In local treatment, the one indication most important is to relieve the itching. Every patient even if only one pock was present complained of itching, and where there were hundreds it became almost unbearable. Ice water compresses applied to face and hands or any part where the eruption was abundant seemed to meet the indications.

Now to return to management of the epidemic. In the first

place to establish a quarantine you must have a diagnosis, and I want to tell you that this is not as easy as you may suppose. In our epidemic, the disease first appeared among the children. They were not sick and did not present the characteristic symptoms. The eruption was not what our books say small-pox is like, at least it did not look that way to me. Consequently the disease was called chicken-pox, and got into the schools. When the disease made its appearance among the adults it was more easily diagnosed, but the damage had been done and small-pox had its start in the community.

After the disease had been pronounced small-pox, nothing is left to do in Iowa but quarantine. It was demonstrated in our community that quarantine will not prevent the spread of the disease. It can be clearly seen why. In epidemics such as ours, the disease is so mild that often times a physician is not needed and the case is never reported. Then again it is very hard to keep a free born American citizen, who is perfectly well, in a quarantined house with a sick one, and the quarantine is continually broken. Thus it can be seen that here we defeated the ends which we wished to accomplish. To make a quarantine effective, all exposed persons should be held 18 days. To do so works a hardship on a man who is perfectly well, and prompts him to flee from a house before it is quarantined. I do not like to see people fleeing from a house as if it were on fire, just before the inmates are placed under detention. These people who have gone still remain in the community, but are not under observation. They are afraid of the physician for fear of quarantine. One of them gets sick, and the disease has a new foothold. It can be plainly seen that instead of limiting the spread, our rigid quarantine regulations only favored its dissemination through the entire country, and provoked evasion of the law and concealment of the disease. Why not use the law on these people? Because every one of us is looking out for our selves to a certain extent, and we will use diplomacy and tact instead, for that will mean dollars to us in the end.

Among other things rendering quarantine ineffective is that domesticated pets can carry the disease. In a village everybody has a dog and several cats, these animals are allowed in the house often times, and run to the neighbors for the children to play with and contract the disease. I am firmly convinced that several cases in our community were contracted in just this manner.

After quarantine has been raised, the people will go to the house where the disease existed, and do so with a false air of security because the doctor has fumigated the house and everything is safe. The laity think some very strange things and they believe that the doctor with his formaldehyde has killed every small-pox germ in the house, because it smells so strong. This we all know is not the truth. The point I have been leading up to is this. That our present laws in

regard to the control of an epidemic of small-pox, are founded on the wrong kind of a theory. It was proven at Lockridge, that quarantine will not prevent the spread, but it is also shown that by vaccination the epidemic soon subsided. On investigation it can be shown that of all our cases, only 12 had been vaccinated previously and that in each instance was a good many years ago. People who had been vaccinated at any time in their lives usually escaped, although subjected to the worst kind of exposure. In several instances I have found people who had been vaccinated in Germany or Sweden when they were infants, who escaped the disease although the children in the same family all had it.

In view of the above statements it would seem that a remodeling of our quarantine laws would be a proper procedure, and the formulation of some plan, by which it would be possible to deal with this disease, without shutting up the well person with the sick. Without keeping a laboring man from earning his daily bread, and without making gray hairs for the physician who has the quarantine work to do.

From a financial standpoint, it is not proper for the community to spend large sums of money to keep a man from getting small-pox when so simple and effective a method as vaccination is offered him by the medical profession. We have all heard of people who have had very bad arms following vaccination, but they were the exception and not the rule. These bad arms are the result of a secondary infection, and are to a large extent preventable.

I am willing to acknowledge that perhaps I am reckoning without my host. And that although a certain immunity is established by vaccination, such is by no means accepted by everybody. Probably it never will be accepted by all the people. But if ever one thing has been demonstrated by the medical profession, it is that vaccination does protect from small-pox, and we are wasting our time to argue with the man who does not believe.

If quarantine did prevent the spread of the disease, we might give it a little consideration, although it is an unscientific method, but it does not, when the disease has the start.

Quarantine merely gives those people who are against vaccination a chance to talk and preach their home spun theories. If small-pox patients were not quarantined you would see the Christian Scientists, anti-vaccinationists, and the fellow who swallows the virus all "take to the woods". This was noticed in our epidemic. At first there were many who declared against vaccination, but as the disease spread, and come nearer and nearer home, vaccination had many converts. Finally only one man continued against vaccination. On investigation it was found that he had himself been successfully vaccinated years ago, and was subjected to exposure in the beginning

of the epidemic and did not contract the disease consequently he was safe.

To wander from the subject of small-pox for a moment. Scarlet fever in our township has been present every winter for years. Homes have been quarantined and fumigated, but still scarlet fever makes its appearance in Lockridge township. These cases are not imported; but come from homes where fumigation has been carried out and a fee collected. Such conditions as these will tend to make a man very skeptical, as to the effectiveness of quarantine for contagious diseases but we have no better method for scarlet fever and diphtheria so must resort to quarantine.

In this paper, I have merely told of my observations, in our epidemic of over one hundred cases. I have no suggestions to offer as to a better method, because I think my experience has not been broad enough, therefore will not discuss compulsory vaccination, the Minnesota method, etc.

Here is hoping that before many years we will have a vaccine or serum for the prevention or cure of every contagious disease. As soon as one is proven, let us drop that military method, quarantine, and deal with that disease in a scientific manner.

In closing I wish to thank the physicians of Fairfield for their attitude while our epidemic was in progress. I never heard of one word of criticism offered me by the profession in the city of Fairfield, I will also say that probably everything in this paper has been threshed over at medical meetings during the past two years. Everything in it I now know to be true since passing through the battle.

The sixteenth semi-annual session of the Sioux Valley Medical Association met in Sioux City, Jan. 24, 1912, under the presidency of Dr. J. E. Garver of Sioux City. The meeting was at the West Hotel. In the evening a musical and toast program was rendered. The program was as follows: Calling the meeting to order by the chairman of the Committee on Arrangements, Dr. C. P. McHugh. Recognition and Treatment of Empyema, Dr. C. P. Howard, Iowa City; The Congenital Predisposition of Functional Disorders, Dr. F. J. Murphy, Sioux City; Anesthesia, Dr. W. H. Dewey, Merville; Operative Treatment versus Local Treatment in Borderline Cases of Infection in the Genital Tract of the Female, Dr. A. C. Stokes, Omaha. Diagnosis and Surgery of Gastric Ulcer, Dr. L. J. Townsend, Sioux City; Surgical Treatment of the Sequelae of Poliomyelitis, Dr. J. D. Griffith, Kansas City; The Pathology of Chronic Interstitial Nephritis, Dr. H. A. Tomlinson, St. Peter, Minn.; Paper, (title to be announced) Dr. Geo. F. Butler, Chicago; The Interpretation of the Venous Pulse Curve. (Illustrated with lantern slides), Dr. Wm. E. Sanders, Des Moines; The Radiograph as an Aid in the Diagnosis of Diseases of the Accessory Nasal Sinuses. (Illustrated with lantern slides), Dr. Ralph H. Parker, Des Moines.

We have received from Dr. Duhigg, secretary of the Polk County Society, a copy of the souvenir program for 1911. Meetings were held monthly except during the summer. There are at present one hundred and fifty-one members of this society—quite a gain during the year.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

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MEDICINE IN IOWA FROM ITS EARLY SETTLEMENT TO 1876.

D. S. FAIRCHILD, M. D., Clinton, Iowa.

Early Operations.

In 1857, Albert Haynes cut off a toe for his brother, Amasa Haynes, with a carpenter's chisel. In 1859, Jake Rice, also using a carpenter's chisel, cut off a toe for Conrad Steinhelver, and later a Dr. Rice came up from Smithland, and amputated a foot for the same patient. All these operations were for gangrene following frostbite.

On Nov. 2d, 1872, Dr. R. L. Cleaves amputated Jas. Will's arm through the surgical neck of the humerus, following an injury in a thresher's horse-power. No professional assistance was available. Two farmers held the lights, and a blacksmith administered the ether. The instruments consisted of a pocket case, a bread knife, and a key-hole saw. The tourniquet was made from a stick, a corncob, and a handkerchief. The result was excellent.

The first class of medical students in Cherokee county were taught by Dr. R. L. Cleaves, and consisted of Edward Parker, now of Sutherland; Benjamin Olds, deceased, and W. C. Bundy, of Aurelia, Iowa.

Data for Cherokee County obtained from Dr. R. L. Cleaves.

Mahaska County.

The first medical society in Mahaska County was organized in 1856 with Dr. Rhinehart, president and Dr. Hopkins, secretary. When the war broke out, the meetings were discontinued. In 1872 a second organization with constitution and by-laws subordinate to the State and American Medical Associations and known as the Ma-

haska County Medical Society, which still maintains its organization and is accredited delegates in both the State and American Medical Associations. The present officers (1876) are Dr. H. C. Huntsman, Pres., and Dr. W. A. Chamberlain, Sec.

Pioneer Physicians.

Among the most prominent was Dr. S. E. Rhinehart, a graduate of Jefferson Medical College, came to the County in 1846, located at the county seat, where he at once entered upon the practice of medicine. He was a cultivated gentleman, possessed of more than ordinary ability and a high sense of honor; always mindful of the rights of his professional brethren and most tender towards his patients. It was but natural that he should enjoy a very large share of the practice and confidence of his fellow citizens. He fell in February, 1875, a victim to phthisis pulmonalis, and was buried under the auspices of the Mahaska County Medical Society, of which he was an honorary member at the time of his death.

J. Y. Hopkins, surgeon of the 33rd Iowa Volunteers, and F. W. Coolbridge, were graduates of respectable medical schools, both men of marked ability and success in their profession, and also Dr. Owen, an undergraduate, came to this county in 1845.

Epidemic Diseases.

With the exception of 1857 and 1858 no epidemic of a serious character has prevailed in this county since the date of its organization, 1844. During these years diphtheria of a malignant type swept over the middle and western portions, reaching into Marion county, with a large percentage of fatality, confined to children and youth.

Effects of Cultivation of Soil: During the early settlement the prevailing diseases were decidedly malarial in character and often grave in type. For many years while large tracts of land were being broken up, there was a marked increase in sickness; since the most of our soil has been brought under cultivation there has not only been much less malaria, but a less per cent of sickness of all kinds.

The number of practicing physicians, 38. Regulars, male, graduates, 24; regulars, male, non-graduates, 6; Irregulars, male, non-graduates, 7; Irregulars, female, non-graduates, 1.

Surgical Operations.

Lithotomy—Dr. Rhinehart, 1; Caesarian Section—Drs. Page and McAllister, 1; Caesarian Section—Dr. Huntsman, 1.

The data for Mahaska county was obtained through Dr. H. C. Huntsman of Oskaloosa.

The Howard County Society met in Cresco, Jan. 26 and elected officers for 912. The president is Dr. H. W. Plummer, of Lime Springs; vice-president, Dr. J. W. Jinderlu; secretary-treasurer, Dr. W. C. Hess; delegate, Dr. Geo. Kessel with Dr. W. T. Daly as alternate, all of Cresco.

PUBLICATION OF A MONTHLY OR QUARTERLY BULLETIN BY COUNTY SOCIETIES.

HENRY GLOVER LANGWORTHY, M. D., Dubuque, Iowa.

One of the important features for county medical societies is a medium through which to reach its members quickly and easily. There can be little question but that every society with a membership of forty or more and growing a bit, would be greatly benefitted by having some form of a regularly printed monthly or quarterly bulletin as the case might be. A few of the reasons for the advocacy of such a plan are as follows:

1. The work while naturally devolving on the secretary is not at all burdensome. A four page combination program and bulletin would be sufficient.
2. The expense incurred will be found little more than publishing the average scientific program.
3. Interest in society work is apt to be increased in direct ratio as members are kept in touch with their own community.
4. The bulletin plan if more generally adopted in Iowa would seem the most practical way of raising the medical standards of the various counties.
5. The author can attest that this method is successful having followed it as secretary of the Dubuque County Medical Society some four years ago.

A publication of this sort becomes at once the official program and bulletin of the society and as such serves the double purpose of stimulating society life as well as issuing a warning against possible evil doers and unethical practices. The writer is not advocating at all that every secretary shall become a medical editor, but merely that a society of any size ought to be able to find someone interested enough in its general welfare to spend the time necessary for adding an extra page of medical comments to the regular program. To be more exact the bulletin plan is briefly as follows: The bulletin should be a small one of not more than four pages and of sufficient size to readily slip into an unsealed letter envelope. On the first page may be printed "Program of the _____ County Medical Society," followed by the name of the city and date and the place of meeting. The second page will naturally contain the regular program of the meeting. The upper part of the third page includes the complete list of the officers of the society. The remaining half of this third and all of the last or fourth page under a bulletin heading is to be used as the bulletin section proper. The strictly bulletin part can be devoted to all sorts of miscellaneous medical news, short editorials and society announcements. That in a nutshell is what every society secretary should try to give to his members. It is first

essential in holding the men of a county together both in organization and in good fellowship. Say what you will every member looks over his society program and therefore here is the chance to drop something into his mind which might prove of interest and benefit. One of the chief things which an attendance at any annual State Conference of County Society Presidents and Secretaries brings home to one is the urgent need for all officers to carry forth the message of perseverance, better programs and more medical news. Society officers have got to keep everlastingly at the matter of programs, everlastingly at the men to get them on the programs and at the meetings if they want success. The profession as a whole look to its county secretary for the real live wire, the real hustler and the man enthusiastic and young in spirit. Its worth while therefore getting the big idea along this line which is do something for the members of your county medical society!

To better illustrate how simple the whole proposition really is let us assume that the bulletin begins, as did my own, by stating that the bulletin would be issued one week in advance of the meetings. Other news and notices can then be included which is in keeping with the occasion. Such announcements as "Those who desire to exhibit pathological specimens, etc., kindly notify the president or secretary at least ten days before the date set for meeting", tends to arouse interest and increase the attendance. Notices of county medical meetings of the vicinity I have found especially good insertions as they are always well received. Comments on such subjects as professional co-operation, enlarging the membership of the society when possible, remarks on many of the better papers presented, discussion of office business methods, city health evils, lodge practice, medical inspection of school children, etc. will all have a place as time goes by. The last month of every year the bulletin should publish a complete list of all county members with addresses. Personal notices had at first better be excluded until the bulletin is well established. In order also to stimulate interest in the scientific program itself it may be wise to mention that the program committee or the secretary is at work outlining the program for the ensuing year and that short papers on medical topics will be welcomed. It may further be worth repeating that on account of the limited time at the meetings no address or paper should occupy more than twenty minutes for its delivery and no member is expected to speak longer than five minutes in discussion. In smaller societies where the men are not engaged in original research the post-graduate course as outlined in the Journal of the American Medical Association may be followed in a general way.

So much then for the idea which is purely in the way of a suggestion. The bulletin plan would hardly be called for in locations

where the majority of members do not reside in the same town. Where a country is thinly settled and not more than three or four physicians are to be found together and members can meet each other only by driving long stretches, such a plan is scarcely necessary, nor is the time yet ripe for it. But even here there is always something more to be accomplished by the average secretary.

In conclusion it should be frankly stated that the bulletin section will not prove popular unless an honest effort is made to avoid mistakes. The Board of Censors will be found an excellent body to which doubtful insertions may sometimes be referred. The criticisms (and there will be some according to the extent of selfish interest of men who may consider their personal interests jeopardized) will really count for little. With tact and giving all an equal chance to read papers and appear prominently before the society the program and bulletin combination will soon be found a pleasure and well worth while.

PRACTICAL MEDICINE SERIES, 1911. VOL. VI.

Published by The Year Book Publishers, Chicago, Ill. The cost of the series is \$10, payable, \$1 each time a volume is delivered.

General Medicine.

This epitome of recent medical progress, edited by Billings and Salisbury, sustains the reputation of previous volumes as a means of readily keeping up to date. It comprises advances in laboratory technique, warns against too much reliance on abstract scientific procedure, gives summaries of the most approved methods of treatment, and considers questions of differential diagnosis.

In the article on typhoid fever, attention is called particularly to variations in the bacterial findings and reviews the various other causal factors. Vaccine therapy in typhoid is treated conservatively; prophylactic vaccination against typhoid is reported to be harmless and is called imperative under certain conditions, as in armies, epidemics, and among physicians and nurses when there is probability of exposure.

In the section treating of the stomach, we find radical changes in ideas both as to anatomy and physiology and the volume is well worth reading for this reason alone. It is probably not too much to say that this series should be universally read by physicians who wish to keep abreast of modern ideas in medicine.—H. R. Reynolds.

SURGICAL CLINICS OF JOHN B. MURPHY, M. D.

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago, Vol. 1, No. 1. Octavo of 133 pages, illustrated. Philadelphia and London; W. B. Saunders Company, 1912 Published bi-monthly. Price per year—Paper, \$8.00—Cloth \$12.00.

These are not student's clinics but Dr. Murphy's famous clinical talks at Mercy Hospital, Chicago, for physicians only. These clinics are published just as delivered by Dr. Murphy, being reported verbatim by an expert medical stenographer. In this way they retain all that individual force so characteristic of the clinical teaching of this great surgeon.

The Saunders Company has undertaken a new departure in medical

publishing by presenting to the profession, living material fresh from the lips of one of the masters in surgery.

We take it that every progressive surgeon will find a place in his library for this work. The original papers from the Mayo Clinic and the practical demonstration of every day work from the Murphy Clinic, will put the progressive surgeon in possession of information and demonstrations he cannot well afford to be without.

The Saunders Company announce that the Murphy Clinics are being issued in serial form, one number every other month (six numbers a year). Each number is to contain about 130 octavo pages, illustrated. The price (sold only by the year) has been fixed at \$8.00 in paper binding, \$12.00 in cloth.

In going over this first number, we find 19 subjects presented, history of case, operation and comments with all the force and charm which has so impressed audiences of medical men for years.—D. S. F.

PRACTICAL ELECTRO-THERAPEUTICS AND X-RAY THERAPY.

With chapters on Photography, X-Ray in Eye Surgery, X-Ray in Dentistry, and Medico-Legal Aspect of the X-Ray, by J. M. Martin, M. D., Prof. of Electro-Therapeutics and X-Ray Methods in the Medical Department of the Baylor University, in the Medical Department of Southwestern University, and in the State Dental College, Dallas, Tex., member of the Texas State Medical Association, American Medical Association, American Roentgen X-Ray Society, etc. Containing 219 Illustrations. St. Louis, C. V. Mosby Company, 1912. Price \$4.00.

This is a most valuable book adapted to the needs of the student in medicine and to the practitioner, and should be in the hands of every practitioner of medicine who is interested in the use of electricity or X-Ray work. Eight chapters are devoted to the theory of electricity, the various electrical currents, to the apparatus needed for electrical and X-Ray work and to the care of the apparatus. This very interesting and important and shows how expensive and delicate apparatus may be economically cared for and kept in the highest degree of efficiency. It often happens that want of knowledge and care will render an excellent outfit useless and the operator is often seriously embarrassed because of its failure to work at a crucial moment. A chapter is devoted to the use of the direct current to the human body, a chapter to electrolysis and two chapters to the use of electricity in diagnosis and treatment of disease of the nervous system. After devoting a chapter to the consideration of High Frequency Currents, the remainder of the book is devoted to Phototherapy and the Roentgen X-Ray. 210 pages are thus given to a detailed description of the apparatus used and how to use it, and to the use of the X-Ray to the treatment of diseases to which it is applicable.

Whatever the views of practitioners may be as to use of electricity in the treatment of diseases of the nervous system, there is no difference of opinion as to the value of the X-Ray in diagnosis. At the same time it is admitted that unless the examinations are made with good apparatus in excellent working order and directed by intelligent knowledge of the workings of the apparatus and of the elements of error, X-Ray work is misleading and dangerous. A careful study of Prof. Martin's book together with a reasonable amount of practice, will put a fairly well trained practitioner of medicine and surgery in possession of sufficient knowledge of the subject to do most excellent X-Ray work. It is most opportune and we cordially recommend it to every real worker in this field.—D. S. Fairchild.

DISEASES OF THE SKIN AND THE ERUPTIVE FEVERS.**Second Edition, Revised.**

By Jay Frank Schamberg, M. D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine. Second edition revised. Octavo of 573 pages, 235 illustrations. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, \$3.00 net.

This very complete treatise by Dr. Schamberg is well worthy your attention. Whether you specialize on skin diseases or only occasionally treat such cases, you need a book of this character, so many of the common diseases have cutaneous manifestations that it behoves the physician to be ever on the lookout.

The text is very comprehensive and complete and the 235 illustrations most of them photographs, draw specific attention to the salient points. Syphilis, in its cutaneous relations, is given ample space, tuberculosis of the skin is well illustrated. Differential diagnosis is a prominent feature of the work. 140 pages are devoted to the acute eruptive fevers—small pox, chicken pox, scarlet fever, measles. The photographs differentiating the above diseases are well chosen.

Probably more mistakes in diagnosis are made in skin diseases than in any other one department, so many of the chronic conditions on superficial examination appear alike. This book will help you greatly. The reputation of the author is unquestioned, the book is beautifully printed, and the illustrations are ample. Treatment is given a prominent place. Many skin diseases are the outward manifestation of internal disorders, and the treatment outlined and suggested fully recognizes this.—C. A. B.

OPERATIVE OBSTETRICS.

Operative Obstetrics, including the Surgery of the Newborn. By Edward P. Davis, M. D., Professor of Obstetrics, Jefferson Medical College, Philadelphia. Octavo volume of 483 pages, with 264 illustrations. Philadelphia and London: W. B. Saunders Company, 1911, Cloth, \$5.50 net.

This book by Dr. Davis, one of the masters in Obstetrical surgery, should be on the reading table of every physician. The book deals only with the surgical complications in the newborn. It is profusely illustrated, 264 illustrations being used. The text is clear, concise, readable and the well selected pictures drive home most thoroughly the meaning of the context.

The progress in obstetric surgery during the past decade has been most marked. We are convinced that far too many practitioners overlook this part of the work. These surgical complications are nearly all emergencies. To be well prepared to meet these occurrences, you need this book.

The book is divided naturally into these grand divisions: Introduction—ample space being devoted to anatomy, asepsis, control of hemorrhage, anesthesia, obstetric operations in hospitals and private homes. Part One is devoted to the surgery of pregnancy (displacements, lacerations, tumors, dilatation, appendicitis, ectopic gestation, etc). Part Two describes the surgery of labor(use of forceps—50 pages with 36 practical illustrations being devoted to this, version, Caesarean section Porro operation, etc). Part Three outlines the surgery of the puerperium(removal of the placenta, control of hemorrhage, lacerations, etc). Part Four fully describes the surgical emergencies of the newborn infant,—from asphyxia to cir-

cumcision. Each chapter is followed by a full bibliography for further reference.

We repeat, the fine and complete illustrations add greatly to the value of the book. You should have the book for ready reference.—C. A. B.

WOOD'S ROSSENMUELLER'S FOSSAE CURETTES.

PERCY R. WOOD, M. D., Marshalltown, Iowa.

The frequency of small aggregations of lymphoid tissue in Rosenmueller's fossae and their baleful influence over hearing is not widely recognized and yet this condition becomes one of the chief etiological factors in the middle ear deafness.

The submerged adenoid exerts a more pernicious influence over audition than the largely hypertrophied growth, which because of its prominence elicits attention and is removed while smaller growths being unfamiliar as pathogenizing agents and producing no gross adenoidal signs escape recognition.

By submerged adenoid is meant sclerosed tissue in the vault whether from early and partial hypertrophy or Luscka's tonsil or simply from the remnants of an incompletely removed one. Multitudes of children lose their hearing because a slightly enlarged pharyngeal tonsil of early life passes unnoticed and finally degenerates into a sclerosed and fibrous mass, filling the cul-de-sacs of the vault and clinging to the posterior lips of the Eustachian orifice, and even if treated later for deafness but little benefit accrues because of non-recognition of these facts.

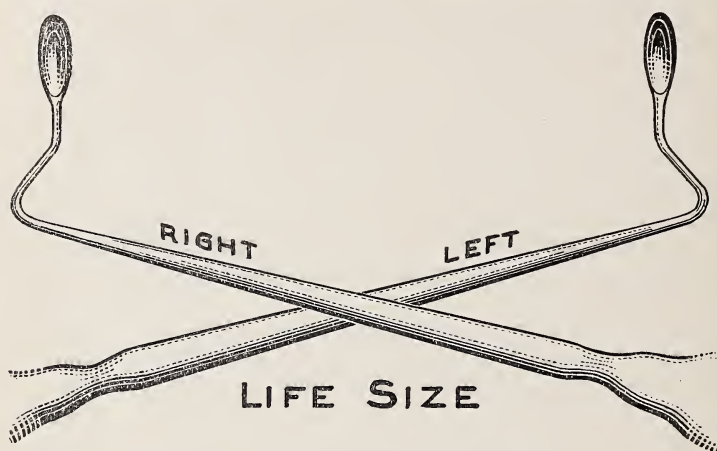
Multitudes of others are passing through the same experience, through failure of the surgeon who operates for adenoids to recognize lymphoid tissue in Rosenmueller's fossae and its tendency to cause deafness. A few operators do employ the index finger in a perfunctory manner, but to no useful purpose, since it is too large and clumsy and dull an instrument, the usefulness of the operation being therefor aborted.

Rosenmueller's fossae is normally lined with lymphoid tissue contiguously associated with Luscka's tonsil. During hyperplasia of the latter the fossae and tube become premanently involved so that it is well to understand that the primary purpose in these operations should be the conservation of hearing, which to insure success generally entails a thorough curetting out of the cul-de-sacs, since these cavities are occupied by this tissue in practically 90 per cent of adults who seek relief of middle ear deafness and tinnitus, caused chiefly by tubal catarrh and good results never obtain unless so treated.

To accomplish removal of this dense tissue requires a very sharp, specially shaped and correctly directed knife, the steel finger tip having no advantages over the naked finger. Dr. Catilli of France employs a small Delstanche ring knife which also fails to meet indications, neither one entering the cavities and therefor presenting no cutting edge to the cone shaped sides.

I have fashioned a pair of right and left curettes as herewith illustrated. The arm rises into the naso-pharynx from the handle at a little less than a right angle, extending to the top of the vault and then executes another almost right angle to the right or left according to which instrument is employed. Upon the terminus of this is attached a sharp spoon, shaped and tapered to coincide with the converging sides of the cavity. When the instrument is placed the perpendicular arm rests against the posterior wall of the pharynx and extends nearly to the vault. One complete turn of the handle passes the spoon through an arch of 90 degrees

and through the entire depth of the fossae. Its cutting edge by closely approximating its sides removes every vestige of superfluous and fibrous tissue. One sweep completes the operation and if employed following each adenoid operation will save the hearing of multitudes.



Dr. D. S. Fairchild,

Jan. 23, 1912.

Editor Journal Iowa State Medical Society.

I wish to present a few thoughts about our State Organization. While excellent, like all things it is subject to amelioration, viz: The Constitution of the U. S. and those of the several states, all have amendments added to them showing the need of some things that were evidently not thought of at first, and others that the exigencies of the times demanded. Nearly all of our counties have now, some sort of a county medical society. In nearly all, a majority of the physicians are members, and have a more or less satisfactory organization. But in 1909, when I was president of the State Society, it was my privilege to make many observations, and I have come to some conclusions, which have ripened into convictions.

As you all know, membership in the county society, includes membership in the state society, and makes eligibility to the Am. Med'l Ass'n.

Now many, I am afraid the majority of the doctors belonging, are satisfied with this nominal membership, but do not attend county society, fewer still attend State meeting, and a much smaller number attend the National Society. But when it comes to voting and holding offices they are on hands to assert the proud distinction to be president or in some other manner to control the various offices in the gift of these societies. They are as a rule jealous of the men who have steadily attended the societies, borne the heat and the burden of the day, and see to it that these men are not elected to the county offices. No matter how unfit, how poorly qualified, or otherwise handicapped, they get the offices, while the better men who know how to do things, and who were the better men for the best of the cause and the profession, are left out, and make place for the unfit. For instance the president of a society should be a man of probity, of professional ability, of honor, in short, a man who does not discredit the profession. The secretary should have some business sense, and should be honest and capable to keep the accounts and write a sensible letter and answer all legitimate society correspondence.

The censors should have acquaintance in the county and should not be a set of quacks, or abortionists, or in other ways be under suspicion themselves. and the delegate to the state society should not be a novice to medical societies, and should not be chosen from the green men who never yet have been on the floors of a state society.

The men who for years, ten, fifteen or even twenty, have by their means, time, ability, and in a hundred other ways, such as presenting papers, discussing those of others, worked on the unthankful jobs of committee work, should not be set aside by those who stay at home, and poach upon the preserves of those who go to state and national societies, but there should be some way to curb this unjust method of ignoring able and valuable men in the various positions of trust and value. It has often happened that some were elected who were not even accredited members. Others were illegally elected who were not even accredited members. Others were illegally elected by viva-voce vote and not by ballot as the Constitution prescribes. Men were put on the board of censors, but were not only strangers in the county and surrounding country, but were not members long enough to have attended more than one meeting, and whose reputations for professional standing were not free from suspicion.

Now this matter of office holding should not only be a matter of honor, but one of trust as well, and one of great responsibility.

Therefore I now propose a remedy which is not unfair nor will it prove burdensome, namely there should be some qualification aside from mere membership, but to add others that include service, and standing. No one according to our constitution can be elected to the office of state president unless he be present at the meeting, and shall have been a member at least two years and so on. See Constitution Art. VIII-Sect. III. So in a similar manner no one should be eligible to be president of a county society unless he has been at least present at one session of the state Medical society. No one shall be elected to the office of secretary unless he has been a member of the county society at least two years. No one shall be elected to serve on the board of censors unless he has lived in the county three years, and has been a member of the society two years and has attended the meetings at least two sessions.

No one may be elected delegate to the state society, unless he has some experience as an attending member of the state society, before his election as such delegate. Not that I would be so particular as to the exact number of years above mentioned, but something of that kind, namely the offices with their intending honor and responsibility shall come as a reward and fitness for faithful work well done, as in other things, just like in other portions of our lives, and not to a lot of cheap grafters who want something for nothing, or the most for the least outlay in mental work and money expense.

By the abuses above mentioned it has frequently happened that a man was appointed delegate to the state society who no more thought of attending than he thought of visiting the Llama of Thibet. The net result was that that county was not represented, the man carried away the honor, his name appeared in the newspaper, and that was the end.

As long as we have a member of the county society also a member of the state society—in my opinion a sad mistake of our present organization—we must see to it that this connection is kept sight of in some such a manner as I have above indicated. When you follow the matter to its logical sequence, it is these nominal members that make their influence felt even in the American Medical Association, by the power of their votes.

They elect delegates to the state meeting, and these delegates elect delegates to the national society.

Now here is an opportunity for the next House of Delegates to cover itself with glory, by introducing and passing some such measures as I have above indicated, and I hope they will do it even far better.

With good will to all and malice toward none,

C. F. Wahrer, M. D., Ft. Madison.

Dr. D. S. Fairchild, Editor
Clinton, Iowa.

Feb. 2, 1912.

Dear Doctor: There are some things to which the attention of the Secretary and every member of the County Medical Society should be called as well as the Sections of the by-laws in reference to dues and their payment.

Every member of a County Society must be a member of State Society.

A member who allows his dues to become delinquent cannot be guaranteed back numbers of the Journal.

The possible impairment of the protective feature of the State Society to members whose dues become delinquent.

Chapter IX, By-laws, Section 1. "An assessment of three dollars per capita on the membership of the component societies is hereby made the annual dues of this society. The secretary of each County Society shall forward its assessment, together with its roster of all officers and members, list of delegates, and list of non-affiliated physicians of the county, to the Secretary of this Society thirty days in advance of each annual session."

Chapter IX, By-laws, Section 2. "Any County Society which fails to pay its assessment, or make the reports required on or before the date above stated shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Society or of the House of Delegates until such requirements have been met."

The State Society will meet at Burlington, May 8, 9 and 10. Dues must be paid by May 8th.

Respectfully,
W. B. SMALL, Treasurer.

Dear Doctor: You probably know that Davenport is the seat of several so-called schools of medicine, and you may have asked yourself why the medical profession of Scott County has not taken measures to drive these institutions out of existence. The profession of Scott county has been quite active, considerable money has been spent, and at least two efforts have been made to bring this matter before the Grand Jury, but always without success. These schools have so many ramifications in a business way, that it is next to impossible to secure an indictment in Scott county. In view of the fact that there have been several recent decisions on the subject, (see Journal A. M. A., Vol. 57, Page 1795) all of which have been against the Chiropractors, it occurs to the members of the Scott County Medical Society that an efficient procedure would be to prosecute illegal practitioners in the different counties of the state, wherever they may locate and to do so promptly. With this thought in view, the Scott County Medical Society, at its January meeting appointed a committee to communicate with each County Medical Society, in the State, with the hope of stimulating some action in this matter.

In compliance with the spirit of this resolution, the committee began

by collecting recent decisions against illegal practitioners, the list being as follows. See Journal A. M. A., Vol. 57, Page 1705, Nov. 25, 1911, also Aug. 5, 1911, Page 501 and July 29, 1911. In addition a chiropractor was convicted in Polk County on January 17th, 1912, and another in the same county on January 19th, 1912.

The advice and assistance of others more familiar with legal matters was sought. The following is an extract of a letter received in reply to a number of questions.

"It is of course entirely proper for county societies to conduct the prosecution in the name of the society, or one of its officers. However, we usually have an individual, who more often than not is a doctor, make the complaint and follow up the prosecution.

Being a criminal offense, there is no expense connected with it outside of the time one spends and the price of a consultation by a decoy patient. The society always reimburses one for this outlay without having any tangible evidence of a contract to do so.

I think it is an excellent idea to have county societies take up enthusiastically the prosecution of illegal practitioners.

The instructions that accompany the suggestion to prosecute would make the following points very, very clear:

1st. To ascertain from the State Board of Medical Examiners that the offender is not licensed.

2nd. That he practices the healing art.

3rd. For a patient to testify, a patient to be actual or a decoy.

4th. If an indictment is impossible in their county, to have the evidence sent to the Attorney General of the State."

Considering the above, and also the recent decisions on illegal practitioners, it ought to be a very simple matter to secure an indictment against illegal practitioners in your county, if action be taken before Public sentiment has been stimulated in their favor.

To sum up the Scott County Medical Society should suggest that action be taken in such other counties as may be harboring any irregular unlicensed practitioners and in which they have not as yet become so strongly established that the proper officials hesitate to proceed against them. This will make it difficult for the schools in Davenport to prosper because their students can not be assured that they may defy the law wherever they may choose to locate. Action is needed now. It is believed that much can be accomplished in a quiet way and with the avoidance of undue publicity or newspaper notoriety. The medical profession has no quarrel with any pathy but it stands for equal tests, equal privileges for all, and for better public service.

Most cordially and with best wishes,

W. L. ALLEN,

G. E. DECKER,

L. W. LITTIG,

Committee Scott Co. Med. Soc.

Probably the best meeting in the history of the Clinton County Medical society was held Feb. 2, at the Kehoe European hotel, attended by nearly all of the Clinton physicians, and a few from the surrounding territory. It was the first meeting held under the new plan, adopted at the annual session recently, whereby evening meetings are to be held once a month, instead of afternoon meetings quarterly. This plan is designed to give all the physicians an opportunity of attending the sessions. The even-

ing meetings does not take up their time from their work, and physicians from outside towns are thus enabled to get to the meetings every month. Supper is enjoyed, followed by a paper and discussion. Instead of having several papers on the program, the plan now is to have but one, and to give it a thorough discussion. Last night the paper was given by Dr. B. C. Knudsen. The subject was "Rheumatism", and practically every physician present entered in the discussion, which was led by Dr. G. A. Smith and Dr. F. A. Hohenschuh. Supper was served at 6:30 o'clock in the grill room of the hotel, which was very attractively decorated with flowers and plants.

The next meeting will be held on the evening of March 1st, these gatherings being held on the First Friday evening of each month. Dr. M. S. Jordan will give the paper next month, the subject to be assigned later.

A spirit of "getting together" was manifest at last night's meeting, which is the primal object of the association. The new plan promises to work out splendidly. There were twenty members of the organization present at the meeting.

Officers for 1912 as follows: pres., Dr. F. O. Kershner; vice-pres., Dr. J. C. Langan; secy-treas., Dr. C. W. Brown; censor for 3 years, Dr. R. E. Everhart; delegate, Dr. E. L. Martindale; alternate, Dr. H. R. Reynolds.

The Polk county society met at the Savery, Tuesday evening, Feb. 21. Dr. A. P. Stoner presented the subject of "Tumors of the Mammary Gland". Dr. C. E. Ruth read a paper on "Porto Rican Medicine."

Greenville, Iowa, Dec. 6th, 1911. Meeting Clay County Medical Society; A. S. Chatterton, President, presiding. Papers read and discussed as follows: Dr. Chas. McAllister—Tuberculosis; Dr. T. H. Johnson—Vaccine and Serum Therapy; Dr. E. E. Munger—Hydrophobia. Officers elected for the year 1912: President, Dr. J. B. Wertz, Spencer; vice-president, Dr. Porter Wertz, Spencer; sec-treas, Dr. G. B. Snyder, Everly; board of censors Dr. Chas. McAllister, 3 yrs., Spencer; Dr. W. J. Durant, 2 yrs., Spencer; Dr. F. J. Coleman, 1 yr., Hartley. Delegate, Dr. W. J. Durant, Spencer.

Dr. J. C. Callester & Son Dr. Chas., of Spencer have entered into a partnership and will make a strong team. Dr. Chas. Callester graduated June 7th, 1909 at Jefferson Medical College, Philadelphia; immediately afterward entered Delaware Hospital in Wilmington, Del., serving for six months as House Physician and Surgical Assistant, going from there to London England. He has put in full time in study and work in surgery and along special lines, being shown special courtesy in his work. Dr. Chas. Callister returned from England the last week in Jan.

The Van Buren County Society met in adjourned session at Hotel Manning, Thursday, Feb. 15th, at 1:30 p. m. with the following program:

Paper, Diagnosis in some diseases of the stomach, Dr. E. W. Pahl; Paper, Diagnosis in appendicitis, Dr. R. N. Cresap; Paper, Some diseases of the gall ducts, Dr. G. R. Neff. At this meeting was held the annual election of all the officers of the society for 1912.

The dues for 1912 are now due and it is requested by the State Society that all dues be remitted before April 1st. Remember the State Society meets in Burlington in May, and it is hoped that a good representation from the society shall in in attendance.

We earnestly urge all members of the profession in the county to become members of the County Society, as the united efforts of the profes-

sion is needed in promoting both his own and the interests of the public in general.—E. E. Sherman, Secretary.

Dear Doctor: Our next meeting will be held at the usual place, Hotel Burlington, at eight p. m., March 13th. The last meeting was an enthusiastic one, and well attended. Come and help make the March meeting even better. Following is the program:

Gastric Ulcer; pathology, symptoms, diagnosis—Dr. J. F. Herrick, Ottumwa. Duodenal Ulcer; pathology, symptoms, diagnosis—Dr. Carl Stutsman, City. Differential Diagnosis—Dr. F. E. Koch, City. Treatment—Medical—Dr. A. J. Thornber City. Treatment—Surgical—Dr. C. S. James Centerville. Bertha S. McDavitt, Sec.

Physicians residing within the domain of that great fertile section of country known as the "Missouri Valley," are looking forward, with pleasant anticipation to the Spring meeting of the society, which will be held at Colfax, Iowa, March 21 and 22, 1912. Colfax is noted for its excellent waters and its palatial hotel and these two factors, together with the most cordial invitation from Col. Donahue, the genial owner of Hotel Colfax, were responsible for this place being selected for our next convention. Colfax is located in the center of the state, and is accessible from all directions; it is on the main line of the Rock Island railway, and but twenty-three miles east of Des Moines, by motor line, giving hourly service, and connecting with trains on the Chicago Great Western railway. These lines give us excellent service from all points east, south, west and north. Colfax is really a suburb of Des Moines, and the profession of the latter city is preparing to furnish several features of our scientific and social programs.

Invitations have been extended to a number of men of National reputation, as well as to the presidents of all the state societies within our province. Several symposia are being arranged, and a program of great scientific interest may be expected.

Tuberculosis dispensary, Dr. J. H. Peck; The present status of tuberculosis in Iowa, Dr. J. W. Kime, Ft. Dodge, Iowa; Electro Therapeutic Treatment of tuberculosis, Dr. C. N. O. Leir; Further Observations of cases of tuberculosis treated with Clark Spengler's Immune Blood, Dr. Granville N. Ryan, Dr. Chas. Ryan and Dr. D. G. Mendenhall. The economic waste from disability and death due to preventable diseases, Rev. A. E. Kepford, State tuberculosis lecturer; The treatment of tuberculosis with Koch's Tuberculin, Dr. W. C. Scarborough, Superintendent Oakdale Sanitarium, Oakdale, Iowa.

Diagnosis of Diseases of the Kidney, R. R. Hollister.

Catherization of the Ureters, Bransford Lewis and E. G. Mark (stereopticon slides).

Hematuria of the Kidney, Jno Summers.

Malformations of the Kidney, Daniel Eisendrath.

Tuberculosis of the Kidney, Lewis Wine Bremerman.

Surgical Kidney, A. C. Stokes.

Puerperal Thrombo-Phlebitis, Palmer Findley.

Incipient Neuroses and Psychosis, W. B. Kern.

Arthritis Deformans, Arthur Steindler.

The Early and Late Diagnosis of Gastric Carcinoma, Walter L. Biering.

S. G. Burnett and A. L. Skoog will present a symposium on "The Transcendency of Migrain, Family Tree Illustrations" stereopticon slides.

The prevention and Treatment of Deformities of the Chest (stereopticon slides), H. W. Orr.

Caesarian Section for Placenta Previa, Donald Macrae, Jr.

Physical Methods of Treatment in Gastric Disorders, J. C. Watterman.

The Importance of Mixed Feeding, H. M. McClanahan.

Title Unannounced, Wm. Jepson.

Title Unannounced, R. A. Weston.

Longevity, W. H. Waugh.

Medical Conditions in India, D. C. Bryant.

Typhoid Spine, with report of cases, W. O. Bridges.

Dr. G. N. Ryan, of Des Moines, chairman of the arrangement committee will be glad to make hotel arrangements for you, or assist you in any other way to enjoy a profitable outing at this meeting.

Lodge Practice.

These figures we get from a British Medical Journal, and over there is where they know all about lodge practice, to their sorrow: A lodge of 100 members would have during each year 234 weeks of illness. For this the attending physician would receive about \$125. This would be equivalent to attending one man continuously for 234 weeks or four years and six and a half months for \$125. This would be about 53 cents a week, and on the basis of one call daily, would amount to 7 1-2 cents a call, including surgical dressings.

You Eagle, Owl, Moose and Pole Cat doctors deny these figures if you can, and we will gladly publish them for you next month.

We note by the Des Moines Capital that Dr. Thos. Duhigg is candidate for mayor of Des Moines. The Doctor is the very efficient secretary of the Polk County Society. If we had ninety seven other secretaries as active as Dr. Duhigg, every eligible physician in Iowa would be a member of his county society before 1913. We know of several secretaries who are going to make the "outsiders" come in or furnish an extra good excuse.

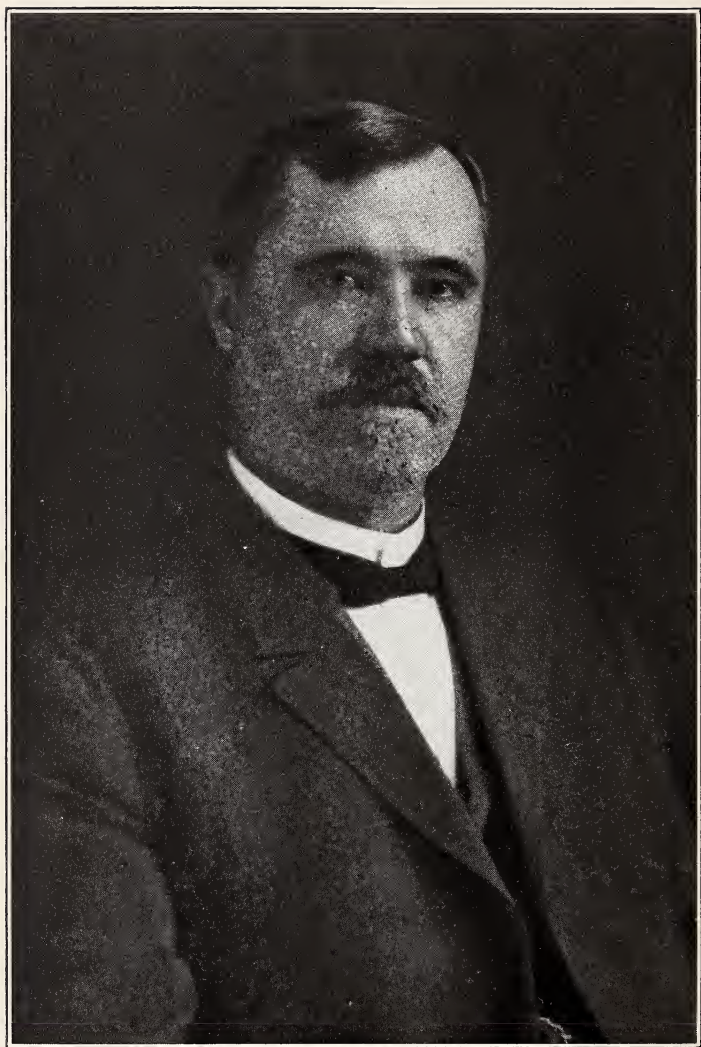
In the April issue, the program for the annual meeting will be given prominence. We hoped to give the preliminary program in this issue, but the copy has not reached us at the time of going to press.

Remember this—the Burlington meeting will be well worth your time and attention. The dates are May 8, 9 and 10.

The March Meeting of the Scott County Society was held March 5th, at the Davenport Public Library at 7:30 p. m.

1. Ambulatory Treatment of Varicose Ulcers—Dr. J. D. Blything.
2. Supernumerary Breasts—with report of case—Dr. J. D. Cantwell.
3. Use of the Ophthalmoscope as a Means of Diagnosis in Some General Diseases—with lantern illustrations—Dr. A. W. Elmer.

Important Note: Write a letter each at once, to Senators A. B. Cummins and W. S. Kenyon, and your Congressman all of Washington, D. C., urging them to support and vote for Senate Bill No. 1, being the Owen bill to create a Department of Public Health. Your influence is needed. Write to-day.



LAWRENCE W. LITTIG, A. M., M. D., M. R. C. S.
Davenport, Iowa.
PRESIDENT IOWA STATE MEDICAL SOCIETY, 1912.

THE JOURNAL OF THE IOWA
STATE MEDICAL SOCIETY

D. S. FAIRCHILD, M. D......Clinton
EDITOR

C. A. BOICE, M. D......Washington
ASSOCIATE EDITOR

No. 10.

**DYSMENORRHEA AND SOME OF THE POPULAR ERRORS
PERTAINING TO IT***

C. F. WAHRER, M. D., Fort Madison, Iowa.

It would seem entirely superfluous to write on a subject so well told in the majority of our textbooks on the Diseases of Women and what is now published from time to time in our better medical journals. Yet there is so much error in the conception and treatment of this plague of our women, that a reminder from some one to those who entertain erroneous ideas as to its composite etiology and still worse, its haphazard and unsatisfactory treatment, is not only not out of place, but a pressing demand for a plea for more earnest consideration of this almost universal torment that afflicts our women for some thirty years of their existence, in that period of their lives when it should be the most enjoyable of their stay upon earth. With the exception of a small part of this article, you can find the greater part of this essay in the modern literature of gynecology. Any one taking such books as Webster, Dudley, Findley, Martin, Ahlfeld, Ashton, and many more, could get along without this paper, but many of my hearers and readers do not read those, and to them as well as to the others, who might or may know, but who are content to temporize with their patients, and treat them with the time worn remedies, such as bromides, virburnum mixtures, opiates, currettement, dilation of the cervical canal, whether indicated or not, or perchance even more drastic measures, such as laparotomy with or without panhysterectomy, according to the finesse, ability to do such operative measures, as the conscience, or rather lack of it, of the attendant may dictate, and as the means of the patient, and her gullibility may admit. Now I do not mention these procedures simply to condemn them but do condemn them and their executors severely, and arraign them before the bar of an indignant profession, when done and not indicated, or when done for revenue only. Of

*Read before Section on Obstetrics and Non-Surgical Gynecology, Iowa State Medical Society, 1911.

all the meek and long suffering sacrifices on the altar of greed, ignorance, and complaisant empiricism, woman easily holds the palm over all comers. And all this because she is so unfortunate as to have a pair of ovaries, two tubes, and a uterus.

Of course you look at me with wonderment when I mention panhysterectomy as one of the therapeutic measures for the relief of ordinary dysmenorrhea. But we have some men very near to my home, who do such work, and that often, after a mere full dress examination, by barely passing the hand over the pelvic region while the patient sits in her chair with all her clothes on, without the slightest suggestion of a pelvic, or bi-manual examination, unless the patient should suggest it or ask for it. To stigmatize such practice as a crime, is stating it mildly, and considerably. The false attitude in our profession that we must shield a fellow practitioner under all conditions, even if he do things that cry to heaven for justice, is wrong entirely, and we should find some way to modify our course in this matter.

Then again, with many, the first thought of remedying a dysmenorrhea, is that there must be a narrowing of the cervix, either the os internum, the os externum, or both which needs dilating. This is sometimes the case, but it is the exception, and when thus indiscriminately done, will only relieve the average patient in the minority of cases. Those not surgically inclined are too prone to resort to anodynes, especially the hypodermic use of morphine or its modification, or to prescribe one or more of the many compounds recommended for dysmenorrhea, or what is far worse, yet very much done by the ill-informed physicians, is to prescribe the many nostrums of which Hayden's compound is a type. Others use the much advertised coal-tar compounds in which the joker is some form of opiate.

Now all this so far as I have related, is done without making an adequate diagnosis except that the patient is about to menstruate and that she has pain more or less severe. The careless surgeon wishes to operate without taking the pains to ascertain the indications, and the equally careless internist dopes the patient with medicated slops for an uncertain etiology. This brings us to the consideration of the diagnosis of dysmenorrhea.

First of all we want to assert the fact that a reasonable amount of pain is normal or physiological with all women during the menstrual period. True, there are a few women who assert that they have absolutely no pain nor inconvenience whatever accompanying the monthly flow. But they are in the vast minority, and the contrary is the rule. But when the pain is of such a degree as to produce inconvenience to normal life, or the patient of such a hypersensitive nervous organization as to cause her suffering to such a degree

as to seek relief, then we must seek the causes that produce her distress. If the physician consulted is a competent man, and one who has a conscience in proportion to his scientific acquirements, he will try to find the etiology, and the exact pathology that is the cause of his patient's torture. Now we all know the trite classification of the text-book writers dividing, for the benefit of the student, the subject into nervous, obstructive, ovarian, and membranous dysmenorrhea. I do not want to take your time in defining these, you have access to your books for that, and can look it up if necessary. But I will make a few remarks on these various forms of dysmenorrhea and if possible, their causes. In passing, I may remark that the textbook classifications do not help much in the study of this affection and a better classification would be into simply primary and secondary, the former appearing without any ascertainable cause, the latter following some well-defined cause or lesions which gives rise to it. Quoting from a summary of this same affection by my son Dr. Carl Wahrer, before this society two years ago, we notice that in statistics taken from the Johns Hopkins Hospital, Gerry Holden gives the number of gynecological cases suffering from dysmenorrhea as 474 out of a thousand cases; of these 59 had no pelvic lesions and he decided that in 222 cases out of the 474 the dysmenorrhea was not caused by existing pelvic lesions. The number of primary cases is of course larger in private practice than in hospital practice, as only the worst cases come to the hospital. Tabler of Berlin has seen 700 cases of dysmenorrhea of which 234 were primary or 33 per cent, and this probably represents about the average number of cases that are primary or have no pelvic pathology." Pain at the period is nearly always present in cases of acute and chronic purulent salpingitis, and the retrodisplacements of nullipara. In multipara it does not seem that displacement causes the dysmenorrhea; if so, it is always a late symptom and is probably not caused by the displacement. The same conclusions prove true in dysmenorrhea of gonorrheal origin, as it is easy to account for increased pain when we have a tube that is acutely inflamed and congested. Tumors of the uterus account for about 20 per cent of all cases, as per Tabler of Berlin and Holden of Johns Hopkins.

The popular error or want of knowledge usually ascribes dysmenorrhea to cystic ovaries and as good a man as Dorsett of St. Louis once believed in this, and advises resection, not destruction if you please, but the experience of honest observers does not now bear out such a cause, and operations ended only in sad disappointments to the patient's and future trouble to the operators, as these patients like to return with reproaches.

Primary dysmenorrhea which has been noted accounts for 33 per cent of all cases has glibly been ascribed to anemia, lack of exer-

cise, slow or defective development, corsets, chlorosis, and nervous troubles. All of these are probably not causes that are demonstrable except the nervous ones whose name is legion, and might be a remnant of the plagues left to afflict poor women.

These usually can be traced to the very beginning of menstruation, where the girls heard their mothers and other indiscrete women retail their, and other people's sufferings, in the presence of their over-susceptible daughters. These suggestive recitals are powerful for the impressions of receptive minds, as are also sympathetic tales recited in girl's boarding schools, where there is scarcely a day when some chum is not suffering with some such ailment. Again, these never-ending nervous, hysterical habitues, who surreptitiously have hidden a flask of brandy and some little mysterious morphine pills, for such periods of especial suffering when lessons are bad and the teacher is cross, and late hours emphasize the monthly affliction, are a fertile field for the consciousnessless ghoul with his dilator, or hysterectomy outfit, that always cures to stay cured forever. But a poor girl cured with a hysterectomy, is not worth the curing, for what is there left for such a being to enjoy, any more than the ephemeral scramble of a chicken with its head cut off? Many such cases of dysmenorrhea are due to the same causes that possessed Maud Muller, after giving the judge the drink of water, where "a vague unrest, and a nameless longing filled her breast;" and surely furnishes no excuse for a surgical operation.

Now we will admit that not many men do hysterectomies for a mere dysmenorrhea of primary origin. Yet how can a man tell if he have a primary or a secondary dysmenorrhea, when he but passes his hand over the clothed and corseted abdomen, then tells the poor victim she will never be relieved unless she has an operation, and a hysterectomy is the result. Yes, you seem to either distrust me or your ears when I tell you such stuff. But in my own county there is such work done, and the excuse given by the vampire is that he cleans out the pelvis because he doesn't want any other doctor to come in afterward and criticise his work.

Now as to the consideration of the main ones who have primary dysmenorrhea and for whom dilation is most always advised and done. It is claimed under examination that all these girls have pin hole os uteri. Well what if they have? That is normal for nullipara, and these always dilate during the menstrual period, as can be ascertained by making an examination during the flow. Most of these patients suffer before the flow begins, and get relief as soon as it is established.

But it is contended that the os interum is at fault. Granted such is the case in a minority of cases, and some relief is obtained for a few periods, it will soon be as bad as before. And the too confident

operator will have to bear the reproaches and justly, of the sadly disappointed patient. She may then be told by another equally over-confident superficial observer that all she needs is a thorough dilation and a currettement. She tells him that was done by Dr. A. but is assured that it was not done thoroughly. Another dilation follows with the same disappointment as before only more poignant, and she is now ripe to fall into the hands of our hysterectomist. He will of course cure her. No other man will have a chance to see what he did. That is like the cure of the sheep-killing dog, by cutting of his tail, if it is cut off very near the dog's head. The operation is radical if that is what is wanted, but what is the rest of the dog good for?

And all this is because some one blundered, didn't make a diagnosis, simply followed an erroneous fad, and made a diagnosis from a symptom. To make the diagnosis of dysmenorrhea is not a diagnosis, any more than to make a diagnosis from a headache. It is not enough to make a diagnosis from the fact that a woman has pain accompanying her periods, you must know why she has a pain, what caused it, does she have any pathology, or is her trouble simply functional, is she neurotic, or hysterical, has she an inflammation of the ovary, the tubes, an endometritis, a chronic or sub-acute peritonitis, has she a traumatism, has she some kind of a tumor, is there co-existing disease in some manner responsible for the pain, has she ves-ceral neuralgias, if so, or if not, treat or don't treat, according to the findings.

Let me repeat this once more and let it sink deep into your soul, that the diagnosis of dysmenorrhea is not a diagnosis at all, the patient has that made for you, to begin with you must do more, or you have not done your duty, and you are as helpless as a babe and your ministrations as useless as that of the merest layman or ignorant empiric. Why we have anodynes galore, almost any of which will answer the demand for the mere purpose of relieving the sufferer of pain. But what she wants is relief, not for today, but for aye. True she may ask for the impossible in some cases, but until you make a diagnosis, you are at least not excusable. Now in most cases she can be cured if she will accept the remedy. And now some of you are wondering if I have a remedy. No there is no one remedy, there can be no one remedy, no one method of procedure. But the key is found in our literature which is plenty, and really deserves a monograph where all available literature may be found, because of the importance of the subject. In Webster's Diseases of Women, you will find beautiful drawings by Dr. Carl W. Wahrer, my son, representing Gebhardt's view of mēnstruation.

In this you will see that there is temporary congestion, which may become so intense as to cause more or less obstruction, stress, and indicates the need of drainage, which in normal cases proceeds

without notice by the patient, in abnormal cases, with more or less pain. In these latter there is a damming back of the secretions, absorption toxemia, and even sepsis may occur, especially if there are other pathological factors aiding the processes above. These especially are obstructing neoplasms, retroflexions, or other displacements, inflammatory products foreign to the normal monthly processes, gonorrheal or syphilitic factors, etc., all of which must be taken into account if we wish to do something effective for the patient. Now in these obstructive forms as well as in those in which the uterine cervix is stenosed and needs dilating, we can do nothing better for relief and cure than to favor drainage by introducing a canula or drain like or similar to the one I will show you, and leaving it there some three to six months or even longer until the uterus becomes accustomed to it and ceases to contract down to abnormal minimum diameters, but remains open, and will not respond to every little stimulation, so as to produce spasm and thus increase the obstructive tendencies mentioned.

Many instrument houses make these of metal and as well of rubber, the latter probably are the best as they do not corrode from the secretions, or with any of the medicaments that may be used in some cases. Be sure the instrument is long enough to pass the os interum so as to be retained by the patient. These should be removed and cleaned at times, but immediately reintroduced until they have accomplished their work.

This procedure will relieve permanently over half of the cases presented to the average physician. Those dependent upon demonstrable pathological lesions must be dealt with according to the findings, and it will save you time if I will not attempt to mention these as their name is legion, and any competent and honest surgeon will be abundantly able to cope with them successfully, in most instances where the lesions are not of a malignant character. Yet you will remember that the work of the surgeon can be effective in only a minority of cases, as Theilhaber in *Central blatt for Gynäkologie* says, with good reason that the causes of dysmenorrhea in more than 3-4 of all cases are purely functional. Harris in the April 15th *Journal of the A. M. A.* taking advantage of the anatomic fact that the inner 3-4 of the ovaries and tubes are supplied by the same nerves and pain from either of these can not be differentiated, he suggests that where it can be ascertained that this region is the source of pain, it would be a good procedure to resect these nerves, for the details of which I refer you to his article. Operations on over 20 women have by this method relieved nearly all of well selected cases. But he says it has its limitations and these are many. Should the thoughtful family physician then not be able to cope with certain cases of dysmenorrhea it would be well to consult a neurologist rather than any one else unless it can be well demonstrated that the case is a

surgical one. Now to conclude with a resume of all the above.

1. Dysmenorrhea as a rule is badly treated by the majority of all physicians.

2. Dysmenorrhea is generally diagnosed as to its etiology too much stress being placed upon surgery for its relief without an adequate cause for such a belief.

3. The chief causes of dysmenorrhea are either functional or pathological, the former covering over 3-4 of all cases, hence surgical relief can be found in less than 1-4 of all cases.

4. That the usual routine swat treatment for menstrual pain must be deprecated, as it does not lead to cure but to disappointment, which alone is an additional factor to cause an increase in functional disturbances, and but throws discredit upon our profession.

5. That we must seek further than just merely the presence of pain accompanying menstruation for the cause of all this misery and disturber of our home life, and patient search will usually reward the attendant in proportion to his ability and perseverance, and relatively aid in the relief of his patient.

6. That ultra-radical surgical measures are not called for except where demonstrable pathological lesions are clearly the cause of the dysmenorrhea and where there is well founded justification for operative measures, and a good hope for recovery. A woman is not to be operated on merely because she is a woman, and has tubes, ovaries and a uterus.

7. That this is not an arraignment of the medical profession for ignorance and incompetency, nor an impeachment of their honor, but an impassioned plea for the relief of a daily, all-too-common affliction of our women, for which so far not sufficient has been done worthy of the name of rational treatment, and for whom I make an earnest appeal to all classes of medical men, so that we may be able to improve the happiness in our homes, and scatter sunshine in dark places.

Discussion.

W. R. Whiteis, Iowa City: I testify that I have enjoyed this paper very much, as doubtless every other member of the Society has. I am sure that it is a very timely paper. The mere fact that we have to do continually with dysmenorrhea, and that we are so often unfortunate in our treatment, is apt to induce us to look upon it as a disease which is to be treated purely in a symptomatic way. The doctor has told us that many of these cases are surgical, but that the majority of them are not surgical. I hoped he would be able to tell us which of these cases are surgical and which are not. We are told by good authority that about one-third of these cases will receive benefit and about 25 per cent will receive permanent relief from dilatation. The same authority confesses that he has not always been able to say before the dilatation whether it is to be temporary relief or whether it is to be a relief at all. Cases that have severe pelvic inflammation associated with dysmenorrhea do not always get relief by having the pelvic inflammation removed. The doctor did not tell us exactly what the treatment is to be in those non-surgical cases that are in the majority. He might have told us that this is a disease of civiliza-

ion; that the aborigines are comparatively free from this trouble: or in other words, if our civilized woman went back to nature, she would be free from this sort of trouble. I think the older practitioners will testify that dysmenorrhea among younger women is not as common to-day as it was formerly. It is not as popular now for the woman to have a wasp waist and a chalky complexion. Today the athletic woman seems to be the ideal, consequently she is not so prone to have these troubles of the sedentary individual.

I am sure every practitioner has had the experience that I have had in consulting with cases of this sort. Young women will come in suffering from dysmenorrhea. You investigate the history of the individual's life, and she will tell you that she has been in the habit, when she had a social engagement and the menstrual epoch was due, of taking a cold bath or an ice bath and postponing it for two or three days. After keeping up that are prone to produce this condition.

C. W. Baker, Stanwood: The doctor made the statement in his paper that about thirty per cent of these cases normally have pain. I would not want to believe him as saying that it is normal for anybody to have pain, either in menstruation or in childbirth, as Dr. Witte says, it is a consensus of opinion among older physicians, who have studied this for years, that the aboriginal people get through these troubles almost entirely without pain, and that pain comes only when there is more or less congestion or nervous spasm about the uterus. I feel that if thirty per cent—nearly one-third—of all the patients with menstrual trouble have pain, it is because there is a nervous taint that has been ingrown and brought up. You may think that I am saying, "I told you so," but I think that is a thing that we can substantiate; that the pain that we have is ingrown there; it has been brought up from childhood. The young girl has been forced and strained in such a way that her nervous system is broken, in a sense; she is a partial nervous wreck. A good many of these patients we cannot relieve with anything but narcotics. Dr. White's suggestion that they be built up with tonics or in any way we can build them is the treatment that will relieve most satisfactory.

J. F. Herrick, Ottumwa: There can be no question but what a certain number of these cases are surgical. They are purely surgical because there is a real organic disease that can be remedied only by surgical treatment. But, on the other hand, as one of the speakers said, probably three-fourths of all the cases are functional, and these are the cases that I think are chiefly under discussion. The purely surgical cases, when a diagnosis has been made, can be treated with proper surgical measures. The other three-fourth—if that be the percentage—are among the most trying conditions that we meet in general practice. I have thought the subject over many times, and have rather come to the conclusion that the pain of dysmenorrhea usually is not due to obstruction, but to a spasm of the uterine tissues, especially of the cervical tissues, and is of the same nature as the pains of labor. The pain of labor is due to a spasm of the muscles of the uterus; the pain of dysmenorrhea is due to spasm of the uterine muscles, probably mostly in the cervical region; not because there is obstruction there, but because there is spasm there. We have colic or spasm of the intestinal canal when there is no obstruction, we have an intense pain, and these pains are due to the contraction of a hollow viscus. And so I believe dysmenorrhea is due to a spasm of the uterine muscles. It may be obstructive, but usually is not. Why have we spasm of that uterine muscle? In many cases it is due to faulty habits of life. We may call it the uric acid diathesis, as it was formerly called; but I don't believe that is a good name. During the dysmenorrhea we have a spasm of the arterioles, the feet and hands are cold and the face is pinched. Back of all that there must be some cause. As the essayist said, hunt for that cause. It is possibly due to faulty habits of living, faulty diet, eating too much sweets, sugars and starches and not enough of fruits and vegetables. Those things must be corrected, otherwise no treatment, curettage or the stem pessary will eventually cure. That means that the patient's whole life must sometimes be changed.

I think another element is late marriage and child-bearing. The aborigines were given to early marriage and child-bearing, and these conditions did not develop of which I have been speaking.

I do not believe all menstrual pain is abnormal; a slight discomfort is perfectly normal, as I believe pain in labor is always normal, not only in

the human family, but in all animal creation. I have seen enough labor in animals to have every reason to believe that they suffer, and the human female as a rule, either the aboriginal or the highly civilized, will suffer—the highly civilized the most, of course. Some discomfort during menstruation may be normal, but this disabling pain is abnormal.

Frank W. Stewart, Colfax: I noticed that the essayist stated that three-fourths of these disorders are functional. I would like to have defined to me what is a functional disease. It is said that digestion is a function of the stomach. We have indigestion, and we call that functional disease. What do we mean by that? We mean that there is something that is faulty. But I am afraid that that word is like charity: It covers a multitude of sins. It covers a multitude of diagnostic sins with the doctor. He doesn't hunt up the cause; he disregards the pathology of these cases. If a certain amount of pain is normal to the menstrual period in women, that is all right; but in three-fourths of these cases, if we have more than a normal amount of pain, if we search carefully we can find some pathology for that. There is some causation for that, and to simply use the term "functional disease" I think is not right, because that disregards pathology, etiology and everything else.

Dr Wahrer: In twenty minutes one can't tell everything. In regard to some of the criticisms, the first speaker said I didn't say which were surgical and which were non-surgical. Well, I did; that is the only difference. Those who have demonstrable pathological lesions (which are in the minority) are a subject for surgical intervention; those who do not (viz: about three-fourths of them) are non-surgical.

I used the word "functional" in the restricted sense—largely in the sense in which gynecological writers use it in speaking of dysmenorrhea: where we can find no ascertainable, demonstrable lesions that call for surgical interventions.

Just lately in our town a poor girl, otherwise healthy, and a hearty, and fine-looking girl, had a pain in the right side. She had a bad appendix, and when operating the operator noticed that she had a cystic ovary. What did he do? He made a clean sweep; he robbed her of her uterus, her tubes and her ovaries.

This case was duplicated by the same operator in about two weeks in a girl of twenty, of robust and splendid sexual development whose mate or soul-longings were expressed in monthly backaches and head aches, and who was examined by one of America's famous surgeons and advised to return home and await the natural outcome of such cases, but who fell into the hands of a murderous vampire, who made a panhysterectomy firstly for money, and secondly so there would be a cure for the expression of what was merely the longing for her mate.

Who gave that man a right to mutilate a sound woman and rob her of all that was the means of giving her the joy and fulness of her life? No one gave him the right unless it was the connivance of her physician, who was either ignorant or equally guilty with the prime offender.

REMARKS REGARDING THE PROGNOSIS OF SOME EYE CASES.*

G. F. HARKNESS, M. S., M. D., Davenport, Iowa.

The title as handed to our chairman requires some apology on my own part to you. In the short space of time allotted I simply wish to report several cases. These cases have no particular connection, and all can not be reported completely, since they have not reached a termination. They did offer to me at least some difficulties as to diagnosis and more particularly prognosis and my excuse for presenting them lies wholly in the desire to learn something from the

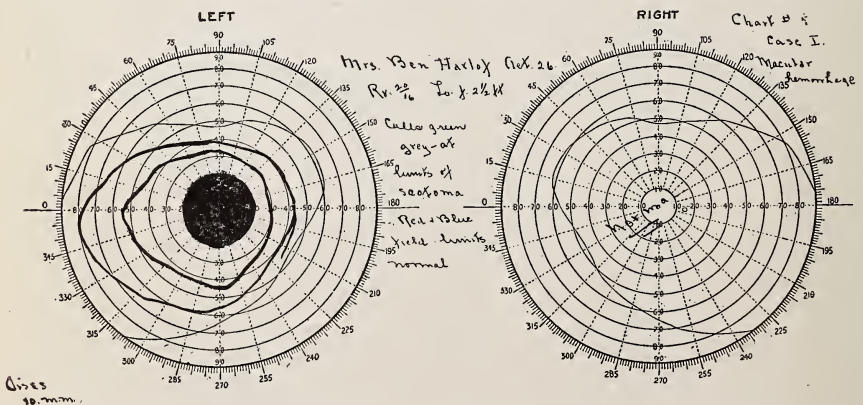
*Read before Section on Eye, Ear, Nose and Throat, Iowa State Medical Society, 1911.

discussion that you may be kind enough to accord them.

Case 1. Mrs. H., age 26, first seen Dec. 31, 1910, complaining of a diminution in the vision of the left eye. Her previous history regarding her general health and her eyes was negative, with the exception that she was recovering from an ordinary acute coryza. Two days previous she had suddenly noticed that she could not see as well with the left eye. No history of pain or headache. Temperature normal and pulse 78.

The external appearance of the eyes was normal, vision Rv. 20-16; Lv. fingers at 2 feet.

The ophthalmoscopic examination revealed a perfectly normal fundus with the exception that in the center of the macula there was a small circular very dark red hemorrhagic exudate about one to two millimeters in diameter. This dark red spot had a similarity to that generally described in embolism of the central artery of the retina, excepting that the retinal haze was absent. In embolism this spot has been ascribed to the choroid shining through the retina, or to a hemorrhagic exudate either deep in the retinal tissue or between the latter and the choroid. Fuchs states his belief that either may be correct. Further sub-hyaloid or preretinal hemorrhages are more prone to occur in the macular region because the connection between the vitreous, and the retina is here the weakest. Such hemorrhages however are generally of larger size, disc shaped extravasations, with sharply defined edges and with the retinal tissue showing evidence of the passage of the blood through its stroma, or some evidence of the passage of the blood from a neighboring vessel. The small size of the hemorrhage made impossible any differentiation between the upper and the lower halves, due to the settling of blood corpuscles as seen in the larger extravasations of the subhyaloid type. The visual field as shown (PLATE I.) was what one might



expect to find from the ophthalmoscopic examination, the absolute scotoma extending ten degrees from the center and the partial scotoma ten degrees farther. The field limits for white and the colors

were normal, except for green which were not seen and were of course explained by the size of the scotoma.

The diagnosis of hemorrhage offered no difficulty but its location I thought would have an influence on the prognosis. If subhyaloid the prognosis should be good, but if retinal or between the retina and the choroid, the injury that might result to retinal tissue before its absorption would make complete recovery more doubtful. Because of its small size, absence of any disturbance surrounding it, and a slight haziness of the edges, I felt that the exudate was located deeper in the retinal tissues, or between the retina and the choroid and was therefore guarded in my prognosis.

The patient was placed upon potass, iodide gr. xl. t. i. d. Rest was advised but was not followed.

January second, three days after first seeing the patient and five days after the beginning of the attack, the vision was Rv. 20-15; Lv. fingers at 10 feet. The ophthalmoscope showed a perfectly normal fundus, there having been a complete absorption of the exudate. The improvement in vision was most rapid and by January 10th was Lv. 20-15.

This rapid absorption no doubt was a factor in not permanently affecting the retina, yet I do not now believe that it was in this locality within the retinal tissue. Whether it was a very small subhyaloid hemorrhage or one lying between the retina and the choroid I am unable to say, but for the reasons given above believe the latter and fortunately for the patient, my guarded and perhaps pessimistic prognosis was not fulfilled.

Case 2. Nearly three years ago I was called in consultation by Dr. R. H. Peck of Davenport, to make an ophthalmoscopic examination and lend support to a suspected intra-cranial growth or lesion.

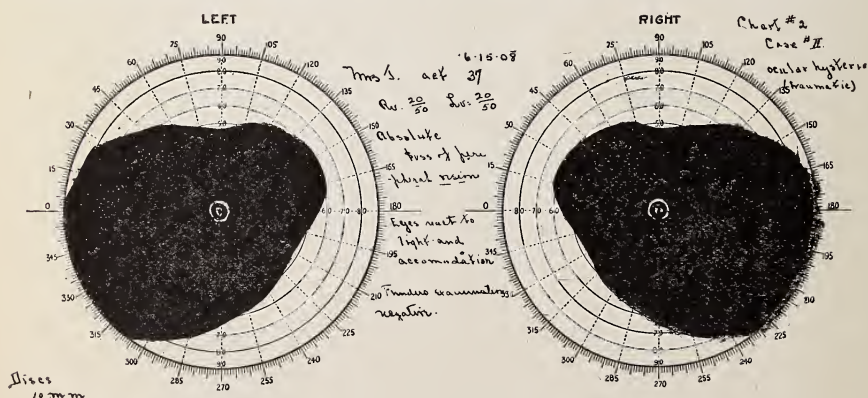
Mrs. J., age 37, married fifteen years. Previous health was negative, excepting that she had suffered from headaches for years, the presence of a congenital anosmia, and that one year ago she had had an acute sore throat with swelling of some of the cervical glands which latter rapidly disappeared under internal treatment.

In February the patient fell, and according to her story suffered a contusion of the occiput (there being no witnesses to the accident), following which her headaches increased in severity but without any definiteness as to type or locality. In April the patient suffered an acute mental disturbance, showing general nervous irritability and loss of memory, the first manifestation of the same being that one afternoon while preparing coffee for a small gathering of friends she made the same four or five times, throwing it away and repeating the process without realizing what she had just done. In April she was brought to Davenport, about two months after her fall. At this time the patient began to suffer from attacks of nausea and vom-

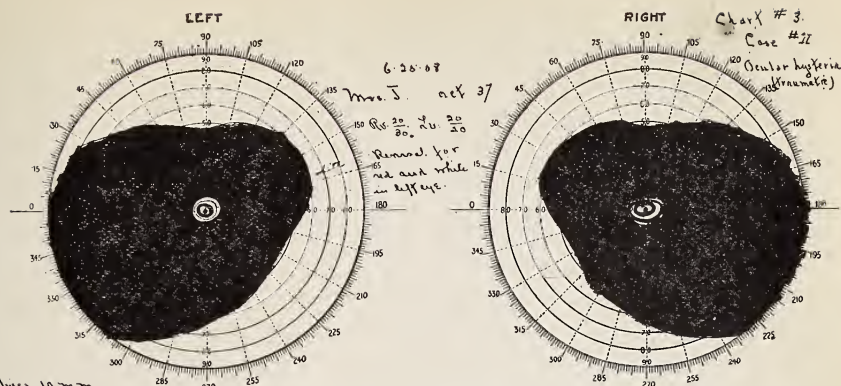
iting, which increased in severity, the vomitus having a terrible odor, as described by the family, and the breath was at all times very offensive. These attacks as well as her headaches reached a climax eight days before I saw her, when the patient suffered epileptiform seizures. The attacks of nausea and vomiting and the headaches became less upon the appearance of the muscular spasms. Regarding the muscular spasms the patient would suddenly fall, had done so repeatedly without injury to herself; would cry out with apparent pain, without locating the same, did not lose consciousness and gave no history of any preceding aura. While she would throw her limbs the spasms were tonic rather than clonic in nature.

Three weeks before I saw her, that is at the time of the attacks of nausea and so forth, and before the muscular seizures, the patient began to complain of her vision and the family noticed that she continually knocked against the furniture in moving about the house. At the time that I saw her her reflexes were slightly exaggerated, and she complained that the left leg and arm did not feel or act normally. The gait while not characteristic, showed a tendency to spasticity. Babinski was absent. Pulse 95 to 120. Temperature 98.6. Urine examination negative.

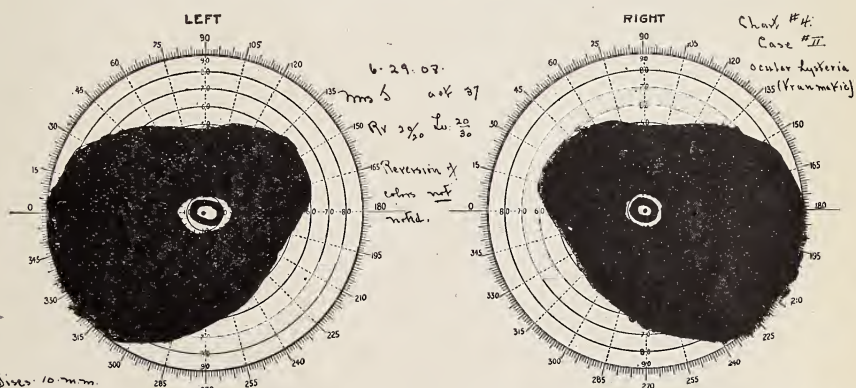
The ophthalmoscopic examination showed perhaps a slightly exaggerated perivascular reflex from the vessel walls with what seemed a slight constriction of the arteries and congestion of the veins and a slightly tortuosity of the latter. Otherwise the examination was negative. Reaction to light and accommodation was normal. With no accurate means at hand at the first examination I was able to roughly estimate fairly good central and an absence of peripheral vision. June 15, 1908, Rv. 20-50; Lv. 20-50 absolute scotoma except for central vision, with the perception of white, green and red as (CHART NO. 2) shown. June 25, 1908, Rv. 20-30;



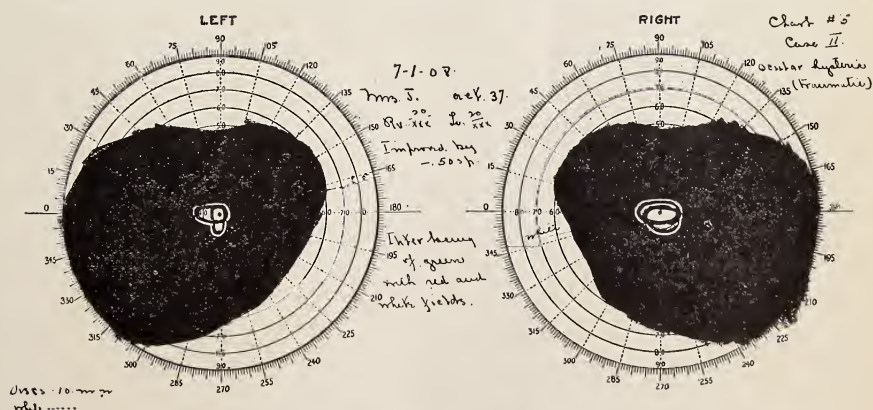
Lv. 20-20, Visual fields with a reversal for red and white as shown in the left eye. (CHART NO. 3). June 29, 1908, Rv. 20-20; Lv. 20-



30, reversal of fields not noted. (CHART NO.4). On the day prev-



ious while standing near a man who was holding a lighted cigar in his hand and who accidentally dropped it, she exclaimed immediately, "you dropped your cigar on the floor." July 1, 1908, Rv. 20-30; Lv.20-30, vision improved by sph-50. (CHART NO. 5). Interlacing



of green with red and white fields. The blue fields were not taken at any time. The fields did not vary during any one examination due to fatigue.

No specific history was elicited. The patient's married life had been a troubled one and the family without a reason given, except

their knowledge of her husband seemed suspicious of such a cause and particularly inquired regarding the same. Specific treatment was instituted without any benefit. Anesthetic areas were not positively located.

The attacks of nausea and vomiting ceased with the onset of the muscular seizures which lasted about a week and following this there was a marked improvement in her general condition. The left arm and leg remained the same. As to her mentality there remained a definite loss of memory and a forced concentration of mind necessary to finish any little thing that she might attempt to do. The diagnosis of ocular hysteria was made. With the history of the fall in mind, which might have produced a circumscribed meningitis, the case to my mind remained at least one of traumatic ocular hysteria. With the assumed assurance of a charlatan I assured her that I had the very means at hand to restore her vision and explained to the family the nature of the ailment and that the treatment would act miraculously or fail absolutely. With many flourishes I introduced her to the galvanic, faradic and mechanically interrupted currents, trying to add everything that might make a profound mental impression. It was without avail and I shortly announced the futility of any treatment in my hands and relinquished the case expressing the hope that eventually some one, through positive mental influence would effect a cure.

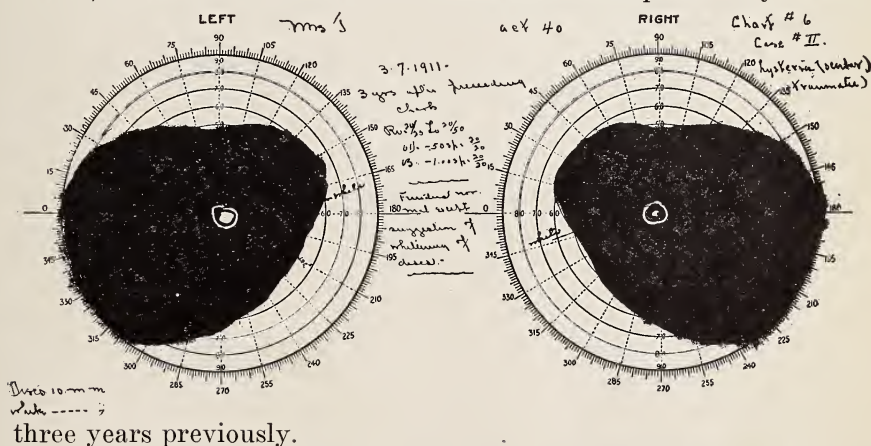
In March of the present year I was asked for a history of the case by Dr. J. D. Blything of Davenport. I had not seen the patient for nearly three years and he informed me that the family had read of Ehrlich and his salvarsan and felt that here at last was a cure. I was surprised that they had not relinquished their idea as to the trouble being specific and still more so when Dr. Blything returned the following report:

"She was well nourished and said she felt well. Speech and actions those of nervous, excitable type of person. Statements concerning herself over emphatic but very vague, especially concerning past events. She walks with ease but left leg is moderately spastic, the foot being advanced in the arc of a circle and the toes scraping the floor. Left arm held semi-flexed at the elbow. Purposeful movements with left arm are spastic in type. Pupils react normally to light and accommodation. Knee and ankle jerks on left side very exaggerated; on right side moderately so. Babinski positive on left side. Muscles of arm and legs show no appreciable atrophy. No general lymphadenopathy.

A considerable number of papular and pustular lesions in the skin, in the edge of the hair, forehead, back of neck and scattered over face, back and chest and more sparsely on legs and abdomen. These lesions are circular, lenticular and serpiginous in outline,

varying in size from pin head to twenty-five cent piece, and dark red where not changed to ulcerating type. The body generally and the back of the neck and the region of the temples particularly, show many pearly white, depressed smooth lenticular and round scars marking the sites of previous ulcerating lesions. Patient states these lesions appeared about the time of her fall or shortly afterwards (they were not present during the times that she had been seen previously.)"

March 7, 1911 the patient was brought to the office for examination. Pupils of equal size and reacting to light but not to accommodation. Slight increase of persivascular reflex from the veins as well as from the arteries of the retina and with a possible suggestion of the discs being lighter in color than normal. Vision Rv. 20-25 Lv. 20-50 O. D.—.50 sph. —20-20 O. S.—1.00 sph.—20-20. Convergence good. No headaches. Visual fields as shown (CHART NO. 6) with no reversal of color fields noted and practically as seen



three years previously.

The typical late syphilides were not present three years ago nor any suspicion of the same. The leg and arm of the left side show an increased spasticity though during the past two years the condition has improved rather than retrogressed.

The patient has had no specific treatment during the interval. I could not conceive that the eye condition could be of specific cause and remain stationary. That the hysterical amblyopia might be coincident with a certain lesion was of course possible. The Wasserman test was advised to differentiate the nature of the central lesion if present, that of a specific difficulty from a circumscribed meningitis and the difficulty with the arm and the leg could be materially benefitted, but the late syphilides present demanded relief and I could see nothing in the eye to contraindicate the use of salvarsan.

The Wasserman test was reported as doubtful.

March 14, 1911, salvarsan was administered by intra muscular injection by Dr. Blything.

April 10, 1911 Dr. Blything reported that the patient felt well. The skin lesions have entirely disappeared, except the one on the lower lip, which is in process of resolution. The ulcerative lesions are all healed. General condition otherwise unchanged.

The diagnosis of ocular hysteria has not changed, probably traumatic in origin. The patient remains in practically the same condition. Who knows the prognosis of a case of hysteria? What influence does the central difficulty if present yet have upon the eye condition? Was the presence of syphilis a basic cause, with the traumatism a contributing factor? Such seems probable, but to what extent? They remain to me as unsolved problems.

Case No. 3. Mr. E. H., age 39, presented himself April 23, 1910, with the following history: A man of powerful physique, having led an outdoor and very active life. His previous general health was negative, outside of that of exposure and that up to eight years ago he used alcohol to excess. In fact he had quite a reputation as a "punisher of whiskey". Has suffered from headaches for years, which two years ago began to be more severe, occurring every month and which have gradually increased in intensity. The headaches range from a supra-orbital to an occipital variety and occur independently of close work. Lately they have been appearing on awakening as well as toward the middle of the day, and last from twelve to eighteen hours. During the past month has noticed a dimness of vision. Vision Rv. 20-200, Lv. 20-25, and not improved by lenses. The ophthalmoscope revealed a retinitis, reflex from the vessel walls prominent, while the arteries and veins showed an engorgement with considerable tortuosity of the latter. The macular, and extra macular region to a less extent, were dotted with various shaped small white exudates and fresh hemorrhages. The appearance of the eye ground were not typical of diabetic retinitis. In the left eye the exudates were more numerous and dense than the right though the central vision was nearly normal as compared to 20-200 in the right eye.

The patient was referred to his family physician, Dr. D. J. McCarthy of Davenport, who reported the blood pressure 250 com, pulse 105, slight trace of albumin in the urine with some granular casts present. The patient was placed upon nitrites and nitroglycerine by Dr. McCarthy.

The diagnosis of albuminuric retinitis was made and the prognosis given that the patient might live from a few months to as long as eighteen months.

Two weeks later the patient consulted Dr. A. R. Edwards of Chicago. Dr. Edwards has recently kindly sent me his findings at that time which I quote omitting that part of the history as given above.

"Severe headaches every month for two years (before 1910)

specially the last five months and lately every morning. Retinae strewn with stellate and various shaped patches of white exudate and fresh hemorrhages. Pulse 120. Blood pressure 250cm. Apex beat one and a half inches outside the nipple line. Second aortic tone extremely loud. Lungs negative. Also abdomen, except appendicitis scar. Freshly voided urine (in office) Sp. gr. 1010, acid, much albumin, numbers of granular and a few hyaline castes. Diagnosis—chronic interstitial nephritis, cardiac hypertrophy and dilatation and albuminuric retinitis. Diet, potassium iodide and nitroglycerine advised. The man will most certainly die and most likely suddenly, when no one can say."

At the time of the examination Dr. Edwards expressed the opinion that some months would probably see the termination of the man's life.

The patient was seen at intervals during May, 1910, the fundus changes remaining much the same, some new small exudates and hemorrhages appearing. The vision however varied greatly.

April 28, Rv 20-200 Lv 20-40; May 4, Rv 20-70 Lv 20-25; May 7, Rv 20-50 Lv 20-30; May 15, Rv 20-50 Lv 20-25; May 29, Rv 20-30 Lv fingers 6 ft.

During June the patient stayed at Excelsior Springs, Mo., under the care of a physician who did not coincide with the previously given prognosis. A request for his findings and reasons for a favorable prognosis has remained unanswered. The patient's general condition and headaches improved and it was reported that his blood pressure had been reduced to 180 cm. but at no time that he was seen in Davenport was it below 220 and from that up to 250cm.

July 6, 1910 the fundus changes remained about the same in the right eye, but the left eye showed a greater engorgement of the vessels and the macular exudates placed in the more characteristic arrangement. Vision Rv. 20-16 Lv 20-40. The patient continued his active life during the summer with apparently no ill effects. Blood pressure remained the same. Headaches appeared periodically every week to ten days.

Sept. 13, 1910 patient was again seen. No new fundus changes noted. Vision Rv. 20-20 Lv 20-20 OD. + .25 sph.= + .25 cyl. ax. 180=20-15. O. S. .25 sph.= + .25 cyl. ax 180=20-15.

November 8, 1910, Fundus changes remain about the same. Blood pressure 220, Rv. 20-100 Lv. 20-35.

During the winter I did not examine the patient's eyes but met him occasionally and the story that he gave me was that he was feeling fine, excepting that periodically, about once a week, he would suffer one day with a most intense headache which left him the next day feeling the worse for wear. His business associates have noticed the development of a nervous irritability in his work, something previously entirely foreign to his disposition.

He is at present engaged in superintending the construction of a railroad in the north, exposed to the elements and with his accustomed energy doing more work than any of his subordinates. Indirectly I have learned that his headaches are much less frequent and less severe.

Such is the history as I have to offer it. I persist in the first prognosis and have about five months in which to have it verified or proven wrong as to the time limits.

The changes in visual acuity seemed to me very much out of the ordinary.

The cases of similar nature that I have met with have followed the general rule. The powerful physique of the patient accounts for the remarkable powers exhibited.

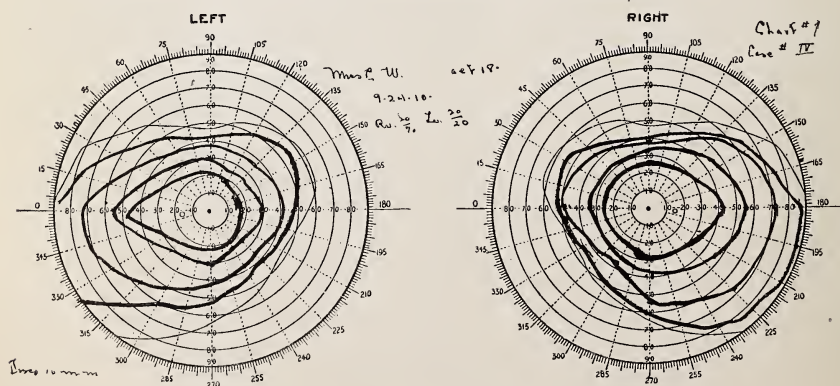
Further is such a man better off continuing his vocation, with its physical demands, or would rest and treatment accomplish more. I do not believe so and the final break in which is inevitable, certainly does not seem to have been hastened by his active life of the last year.

The course of the case has been exceptional to me.

Note. March 8, 1912. Until recently, patient maintained his general strength. Lack of compensation is now apparent and his condition is rapidly approaching a fatal termination.

Case No. 4. Mrs. C. W., age 18. Seen Sept. 23, 1910. Previous history: Has suffered the ordinary diseases of childhood. In 1905 I refracted the patient under atropin and the wearing of a simple spherical correction $+ .75$ gave her entire relief from headaches. In 1907 the patient again returned complaining of headaches. There was no change in the refraction but she was a rapidly growing girl of 14 and anemic. An iron, arsenic and strychnia tonic was prescribed and her condition improved, the headaches disappearing. Last September when I again saw her there was no history of a previous illness, some slight headaches and her complaint was that recently she had noticed a dimness of vision in the right eye.

Vision Rv. 20-70 Lv 20-20. No refractive change.



Ophthalmoscopic examination. Right eye, no congestion of the vessels but a haziness about the nerve head with no elevation perceptible. Left eye normal. Visual fields normal. (CHART 7.)

Urine examination negative and urinalysis report from Dr. L. Guldner, urine cloudy, yellow in color, alkaline sp. gr. 1024. No albumen or sugar. Indican not increased. Cloudiness due to earthy phosphates and carbonates. Sediment dissolved and clear urine centrifugalized giving minute amount of sediment, composed of round cells and mono and poly-nuclear leucocytes and an occasional round and non-nucleated cell like a red corpuscle. Few epithelial cells and few mucous threads. No casts. The alkaline reaction was not considered abnormal due to the time that the urine was passed.

Patient was placed on potass, iodide and the galvanic current and the vision rapidly improved to 20-25 but with no appreciable change in the appearance about the nerve head.

A discontinuance of the galvanism after a short time was followed by a rapid diminution in the vision of the right eye which was as rapidly regained on reinstituting the current. The discontinuation in vision which was also rapidly regained on again taking the medicine.

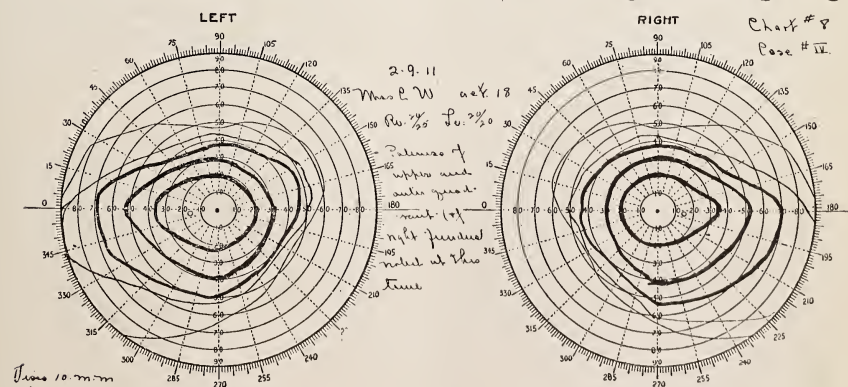
In November the galvanism was practically discontinued but not the iodide solution, without any loss of vision. Repeated examinations of the urine during this period were negative.

In November the refraction was O. D. + 25 sph. + .50 cyl. ax. 90 = 20-25. O. S. + .50 sph. = 20-20.

The fundus changes remained the same.

During January the patient's condition remained unchanged. She felt well, the only variation being that her pulse was more rapid, 90 to 100.

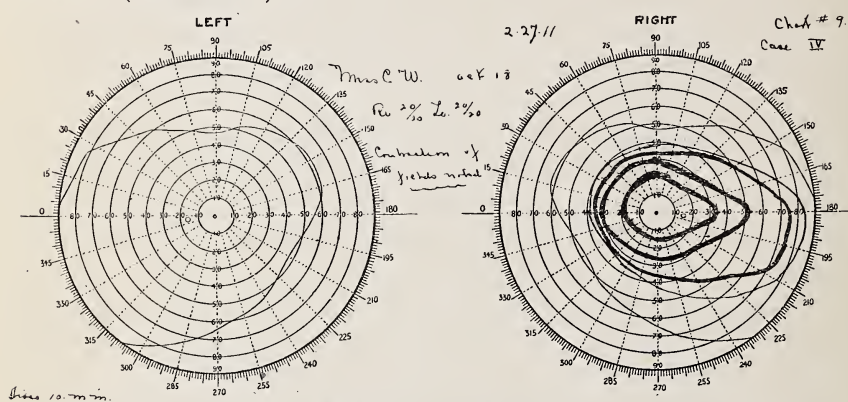
February 10, 1911 there was noted a slight paleness in the upper and outer quadrant of the periphery of the fundus of the right eye. Visual fields normal. Vision unchanged. The left eye at no time showed any variation from the normal. A slight hacking cough



was noted at this time. No temperature. (CHART 8).

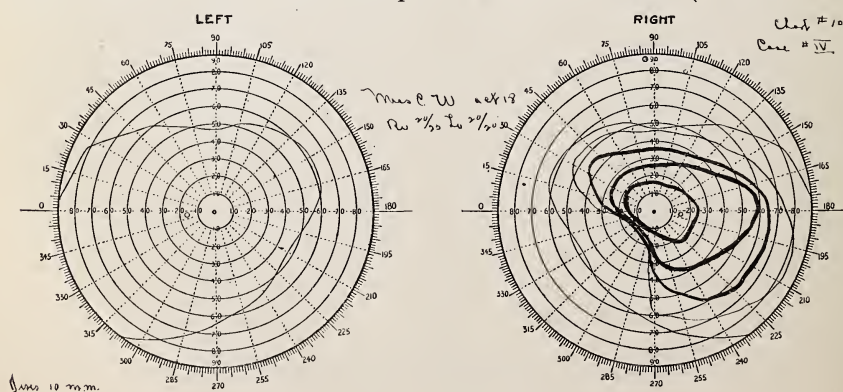
She was sent to her family physician, Dr. J. G. Rohig of Bennett, Iowa for general examination, who reported his general findings as negative, except that on the 12th of February, an afternoon temperature of 99.2 and pulse 116, but that for five succeeding days there was no morning or afternoon variation.

Beginning with the latter part of February the temperature being recorded every three hours there was a distinct afternoon rise of temperature from 99.2 to 99.6. There seemed to be more injection of the retinal vessels, the fundus had almost a furry appearance and the paleness in the outer and upper periphery became more marked. The vision remained unchanged. Visual fields slightly contracted. (CHART 9.)



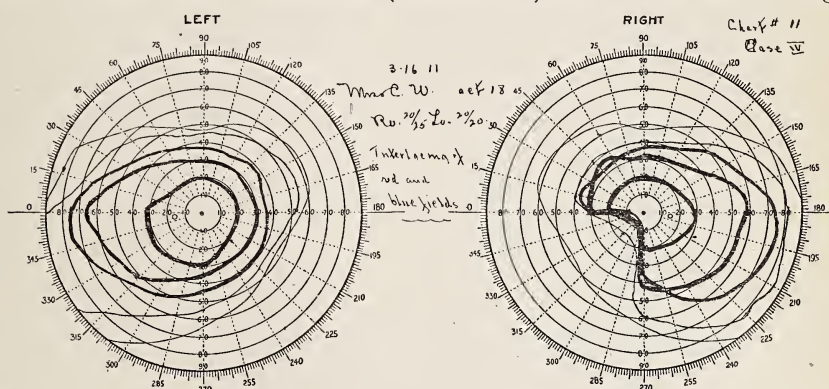
Beginning the first of March the fundus picture rapidly changed, the pale area became white with clear cut margins, the retinal vessels passing over this large patch and standing out very distinctly. Vision unchanged. Temperature constantly above normal—99.2 to 99.6—practically the same both morning and afternoon. A Von Pirquet test made by Dr. Rohig and reported negative, and seen 36 hours after being made, showed a difference between the control and the inoculated areas but only to the extent of a moderate redness and the test was considered doubtful.

The visual fields taken March 11, showed the marked indentation to be due to the choroidal patch as above stated. (CHART 10.)



The vision remained unchanged. $V=20-25$. Downward and inward toward the macula from the white patch several small punctate white exudates were noted. The appearance about the nerve head has remained about the same since first observed over five months previously. Patient's general condition the same. Slight cough at times.

The temperature remained constantly elevated until the 15th of March and by the 18th returned to normal with no afternoon variation. March 15th visual fields (PLATE 11) showed an interlacing

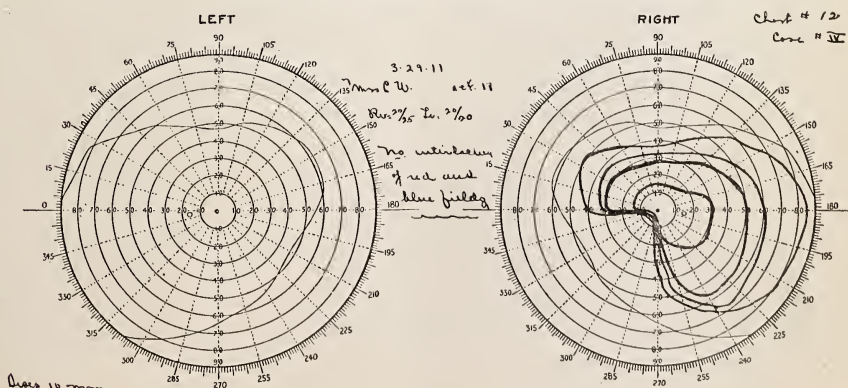


of the red and blue fields. An increase of the macular exudates and the vision unchanged—20-25.

March 15th Dr. George Decker of Davenport saw the patient and from him I received the report as to negative general findings: Pulse 106, Von Pirquet positive with both bovine and human tuberculin and more marked reaction with the latter. Dr. Herbert Decker reported opsonic index .8, sputum examination negative. I requested a urinalysis and Dr. H. Decker reported albumen, with granular and hyaline castes. The patient returned to Dr. Rohig, who placed her upon suitable diet.

Within the next ten days Dr. Rohig made five careful urinalyses with negative findings with one exception and found a few granular castes.

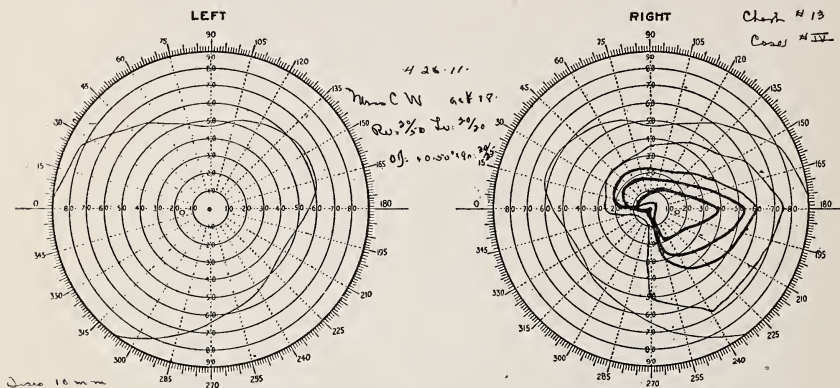
March 29. Vision unchanged. Fundus picture the same. Vis-



ual fields (CHART 12) as shown without any interlacing of the red and blue fields. Patient has no temperature. Urinalyses by Dr. Rohrig during the first ten days in April were negative.

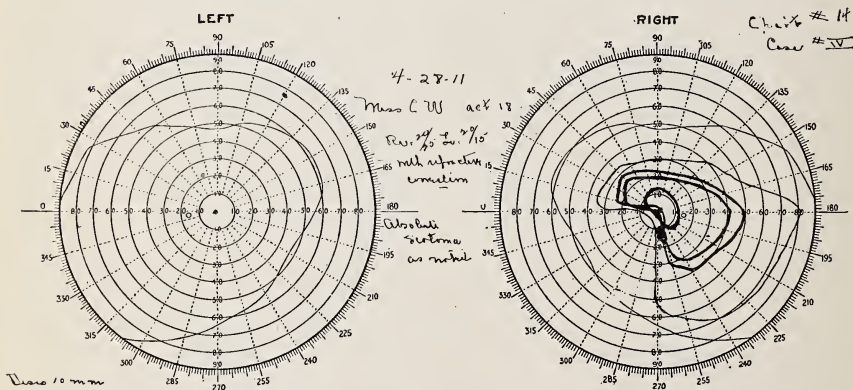
April 25th, the patient returned reporting no temperature, cough or headaches. Vision Rv 20-30 with refractive correction.

April 26th, Visual field (CHART 13) no interlacing of the red



and blue fields, excepting in the macular region. Rv 20-40, vis= + .50 + 90=20-25. Lv 20-15 O. S.; + 0.50=20-15.

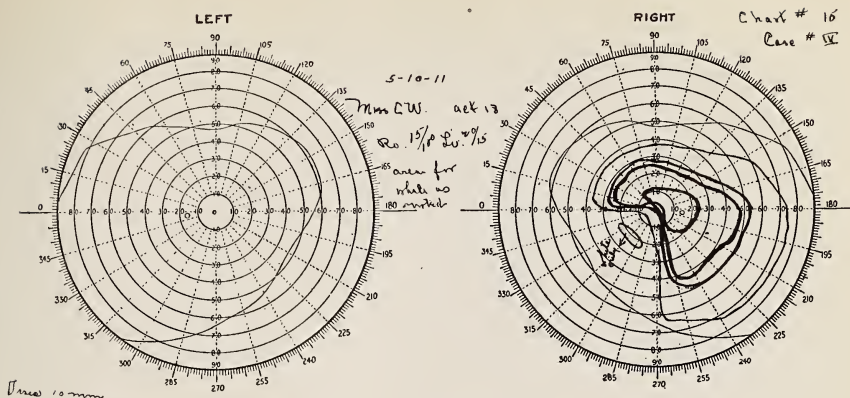
April 28th, no change. Dr. H. Decker urinalysis report—albumin present, no casts (CHART 14).



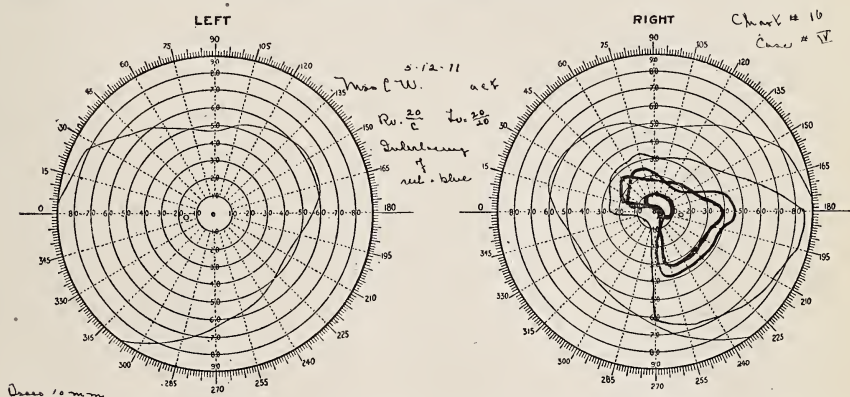
May 10th, patient reported that the day previous vision in the right eye became less. Rv 25-100. Lv 20-15, with refractive correction. Pulse 96, temperature normal. Ophthalmoscopic examination, more pigment along the edges of the choroidal patch and increase of exudate in macular region. Visual field (CHART 15) with area for

College Merger.

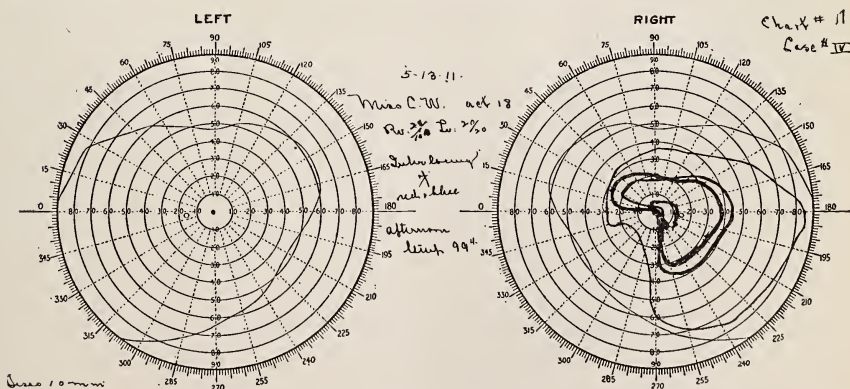
Barnes Medical College has been taken over by the American college and the two institutions have been combined. Dr. James Ball will be the Dean of the consolidated school.—Journal Missouri State Medical Association.



white in previous area scotoma (CHART 16).

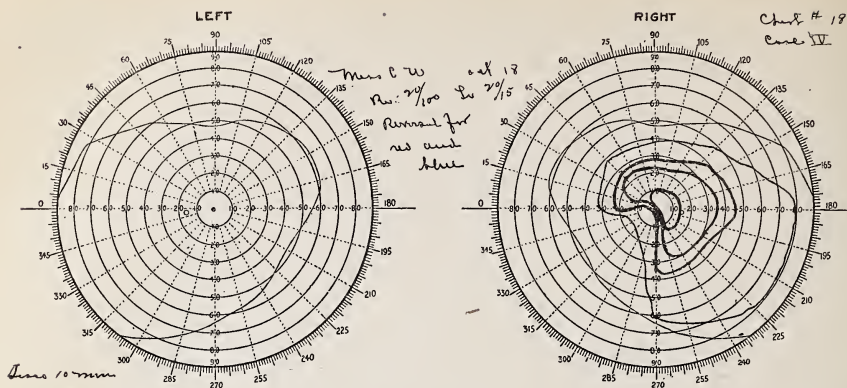


May 12th, vision unchanged, interlacing of red and blue fields.
May 13th, (CHART 17) interlacing of red and blue fields. May 15th



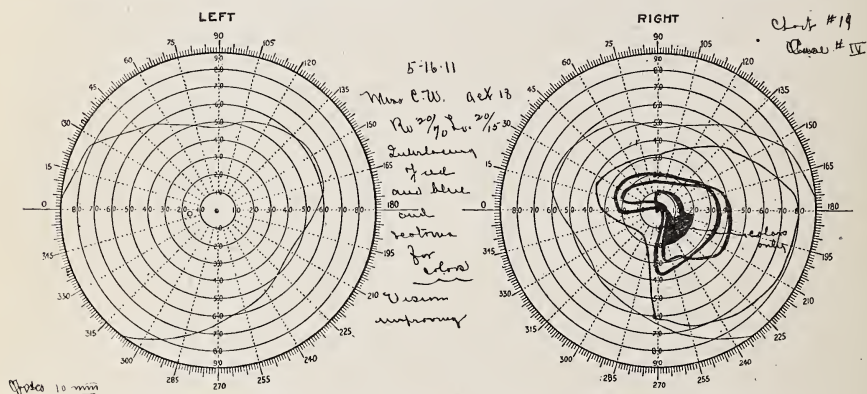
Rv 20-100, Lv 20-15 (CHART 18) no interlacing of red and blue but

There are a number of county societies from which we have received no report during the past six months. Put the Journal on the mailing list, let us have your programs early enough, so that they will appear in the Journal before the meeting. Send all such material to Washington, Iowa.



reversal. Choroidal patch has assumed more of a semicircular outline from upper and outer periphery towards macula and back to periphery. Afternoon temperature 99 to 99.4 for part of four days.

May 16th. Rv. 20-70, Lv 20-15 (CHART 19). Interlacing of



red and blue fields and scotoma for colors as shown. Vision is improving.

The question here may be more properly one of diagnosis than prognosis. The long continued neuritis with late manifest fundus changes is not unusual. That an interstitial nephritis could be reasonable for such a condition and the local pathology be confined to one eye in beyond my conception. As to a cause for this pathology confined to one eye being of a tubercular origin seemed possible. The patient after five months began a characteristic tubercular temperature which rapidly changed to a constant temperature and then after a short time disappeared entirely. The visual fields showing the interlacing of the red and blue fields has not been constant. The positive Von Pirquet may mean simply an old healed lesion elsewhere in the body.

I cannot believe that the retino-chorioditis is nephritic in origin and whether tubercular or due to a tuberculoma within the cranial cavity in front of the cornea I have been unable to find positive support for such a diagnosis.

The treatment, potassium iodide has seemed effective in retaining good vision until the last five days but is now improving again. Syphilis is to be considered only in its hereditary influence if at all. Hospital treatment with baths and forced and rapid elimination might have done more but could not be followed.

It is unfair to ask your opinion when you have not had a chance to see the patient and perhaps discover something that I have overlooked. Granting a tubercular origin, with the vision retained as it has been in this case, would you advise a tuberculin treatment? Fearing the reaction to increasing doses of tuberculin and the consequences that might follow I am opposed to such treatment in such a case. With a continuance of loss of vision I could look with more favor on the use of tuberculin.

My prognosis has not been made.

Note, Mch. 1, 1912, Patient has not been under continual observation. The ophthalmoscope shows in the right eye the picture of a disseminated choroiditis. Rev 7-100. left eye normal.

Group 5—Chronic retro-bulbar neuritis or toxic amblyopia due to tobacco or alcohol.

Without having a statistical report to present I have, as all of us, encountered quite a number of such cases. The prognosis has been universally good when the patient adhered to the treatment and refrained from the use of tobacco or alcohol or both as the case might be. Many of these cases have to my knowledge after their recovery again become users of tobacco or alcohol but I have never yet seen any of them suffer a return of their former trouble.

Such cases, due probably to the time when seen, are not all typical in their diagnostic signs. The history, combined with the contrast between the gravity of the symptoms and the absence of pathognomonic lesions furnished by the ophthalmoscope, together with an absence of any narrowing of the visual fields, justifies the diagnosis. Central scotoma in itself is not diagnostic and early in the disease when partial may be overlooked. The color scotoma of more positive significance is difficult at times to establish and especially so early in the disease.

The local pathology, considering the rapid improvement under early treatment would argue for the disturbance being functional at first rather than an inflammation of nerve tissue.

Further we know that it is not necessarily excessive amounts of alcohol or tobacco that accompany the visual disturbance but as often the constant but fairly moderate habitue, with some lessened resistance who suffers.

Toxic amblyopias of a similar symptomatology occur in persons who have never used tobacco or alcohol but in whom there is marked evidence of improper elimination.

A perverted metabolism, and I recall a recent case specially evidenced by a small amount of sugar in the urine, may be increased by the use of tobacco or alcohol.

That the resumption later of the use of alcohol or tobacco does not cause a second attack, would place them not as basic causes but rather contributing factors, which under certain conditions induce chemical body changes with the retention of toxins in the blood.

Ramsay has pointed out that the papillo-macular fibers at the optic foramen where they enter the nerve system are proportionately much more abundantly supplied with blood vessels and hence more prone to nutritional disturbances when a toxic agent exercises its influence in the neighborhood. This would support the contention that the early disturbance is functional and that the anatomical changes may later be superadded.

We offer a favorable prognosis, not by withdrawing the sole cause but by taking away contributing factors and give nature a chance to correct a perverted metabolism. Or better, we investigate the waste products and discover if possible the nature of the faculty elimination, correct the same place the patient upon a proper regimen and assist in eliminating the basic cause.

We are not then ready to advise our patients to return to their former additions yet the facts remain that many of them do and without any resulting amblyopia.

ATROPIA IN DELAYED LABOR FROM RIGID CERVIX.*

E. H. KING, M. D., Muscatine, Iowa.

Among the factors which retard labor, is a rigid and unyielding cervix. In normal cases at full term, there should really be no cervix, the inferior segment of the uterus being thinned out and the elongation of the cervix lost in the development of the organ. In multipara we sometimes find a rigid and unyielding ring, more or less surrounding the os, due to cicatricial tissue occasioned by lacerations received during previous labors; this condition does not readily yield to the accouchment force and relaceration is often the result.

The obstetrician is often confronted with the following condition: He finds upon examination, a soft, but more or less thickened cervix, and he is led to believe that dilatation will readily occur, but he ultimately finds that although the uterine contractions are vigorous and frequent, yet there is little or no progress in the labor, the patient is more or less tired out with her futile efforts, becomes restless and discouraged and appeals to her attendant for relief. If he holds his examining finger in situ during uterine contraction, he

*Read before Section on Obstetrics and Non-Surgical Gynecology, Iowa State Medical Society, 1911.

will find that instead of thinning out and dilating, the tissues will thicken up and form a hard, unyielding ring around the os, and he realizes that the circular, have a greater strength than the longitudinal fibers, which accounts for the retarded labor.

To overcome this condition, various remedies have been used. Nauseants have been given ad nauseam, sometimes with effect; Chloroform has been frequently used, also with effect, but I have seen stpatients held semi-anesthetized for hours without beneficial result.

I have had the best results in overcoming this condition, from the use of atropia, given hypodermically. It will as surely dilate the os, when not due to cicatricial tissues, as it will the iris, paralyzing the circular and allowing the longitudinal fibers to accomplish dilatation. 1-100 grain is the dose and will seldom have to be repeated. Its use does not increase any tendency to hemorrhage.

Occasionally we will find an intolerance to atropia. In a family in my practice, the mother became delirious from this remedy when used by an oculist to paralyze accommodation, A daughter had severe stranguary and great distress from 1-150 atropia and morphine given by another practitioner for dysmenorrhea. These women were marked blondes. I have seen the statement that blondes were more susceptible to the ill effects of belladonna preparations, than brunettes, but I have used it with blondes without ill effects.

The use of belladonna preparations for rigidity of the cervix, is not new. Many of the older obstetricians recommended the use of the extract, it being smeared around the os, for this purpose. Besides the inconvenience of its application, it would require some time for absorption and effect. The hypodermic use of atropia brings prompt results and is safe.

April meeting of the Poweshiek County Society was held in Grinnell, Tuesday, April 2, 7:30 p. m.

Program: 1—"Physical Training in the U. S. Navy", by Mr. Mack Olsen, member of the board of visitors to the Naval Academy at Annapolis. 2—"Sanitation of Camps in the United States Army" by Dr. John W. Cogswell, Captain Co. K, 54th, Infantry, I. N. G. 3—"Presentation of Specimens". 4—Routine Business. The June meeting will be held in Brooklyn.

The last meeting of the Pottawattamie County Society was held in the Public Library Building at Council Bluffs, Iowa, at 1 p. m., Tuesday, april 2d, 1912.

The following program was rendered: Paper: "Gonorrheal Ophthalmia," Dr. F. W. Dean; "Report of a Case," Dr. M. Moore; Paper: Title unannounced, Dr. C. Erickson. Paper: "Experience with Post Operative Adhesions and some of its Pathology following Pelvic Surgery." Dr. Earl Bellinger.

Tama County Society reports E. R. Smith as president, M. L. Allen as vice-president and A. A. Pace as secretary and treasurer and M. L. Allen as delegate.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

ESTABLISHED AND ORDERED PUBLISHED MONTHLY BY THE HOUSE
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EDITOR	
C. A. BOICE, M. D.....	Washington
ASSOCIATE EDITOR	

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Division of Responsibility in Referred Cases.

In discussing the subject of "Division of Responsibility in Referred Cases" I assumed, (1), That the medical profession is honest. (2) That the family physician is honest. (3) That the surgeon is honest. These should not be violent assumptions and we should be on perfectly safe ground in making them.

We are discussing a question relating to the practice of medicine and surgery, by physicians and surgeons. We had no thought of discussing the doings of the small fraction of a single percent of off color men who rightfully have no place in the profession. We had in mind just such men as compose the Webster County Medical society.

I desire first to make it plain just where this society stands on this question. It voted unanimously to approve the positions taken in both the paper and the resolutions of the committee. The only difference of opinion at any time was as to the advisability of publication. The vote on this point was 8 for publication and 7 against. Two weeks later a motion to reconsider was made and was lost by a vote of 12 to 3, a considerable number of those signing the protest published in the last number of the Journal of The Iowa State Medical Society, against publication, changing their views and voting for publication.

The paper and resolutions express the views of every member present at any of these meetings, which were regular meetings of the society, with perhaps the exception of a single member.

I assumed also in this discussion that the patient belongs to the family physician. I use the word "belongs" in the same sense that

every doctor uses it every day when he says "He is my patient."

The patient falls sick and calls the family physician. This is always done in every case. The patient has a single thought in mind in calling the doctor. He is sick and sends for him to make him well.

The physician assumes control of the case but finds that surgical assistance must be called in. In practically a round 100 percent the doctor is an honest man. This is absolutely the condition in Webster county and my intimate knowledge of the profession in Iowa convinces me that the same holds true in every county in the state.

When the emergency of surgical interferences arises, the patient still relies upon the judgment of his physician and holds him responsible for the choice of a surgeon. In selecting the surgeon the physician assumes a grave responsibility. If the case goes well, his judgment will be approved. If it goes badly, he will himself be condemned. Even the law holds him responsible if he calls in an incompetent surgeon, and bad results ensue.

The family physician will, almost without a single exception, choose a competent surgeon. He will do this, first, because he is an honest and honorable man and thinks only of his patient's welfare; second, because his own interests make it imperative for him to do so. No one knows better than he that all his interests lie on the side of efficient and honest work, and all the talk about "selling the patient", "exploiting the patient", or "working up cases to be taken in" are insults, purely gratuitous, that are hurled at the family physician. This is known, by one of your correspondents, never to have happened in Webster County in all the time he has been here and there is absolutely no ground for believing that it is done any place else. The medical profession of Iowa is composed of men that are high minded and honorable and they are not engaged in the disreputable business of "marketing their patients to incompetent men." I am talking about doctors and not about fakirs. This latter class is a negligible quantity in Iowa and is not under consideration at this time.

Great stress appears to be laid on "sending the patient to the best man, as though there were some preeminent man someplace to whom if cases were not sent, the Doctor would be guilty of infidelity to his patient. At the same time it must be well known to all that there is no "best" man in Iowa. There are scores of good men all over the state. They are found not only in the larger places but in the smaller towns as well. I recall men at Carroll, Sheldon, Waverly, Cresco, Centerville, Cherokee, Fort Dodge, Independence, and in hundreds of other like towns in Iowa. No mistake will be made in referring cases to any of these men. Yet none assumes to be "the best man."

Every family physician knows a dozen good surgeons, any of

whom will do excellent work. Scores of these good surgeons are dividing the fee. It is the rule and not the exception that some consideration is returned to the man who refers the case. This is usually given under some other title, which does not grate upon the ear like the word "fee splitting", but it is fee splitting just the same. It is conceded by our critic that fee splitting exists in Clinton, DeWitt and Cedar Rapids, and I personally know that it is done in every county in Iowa.

It is this general custom that is being practiced, and often strenuously denied, with which we have to deal. We sincerely believe that the only way to meet it is to recognize it and deal with it openly and in an honorable manner. Denying a thing we all know exists, and exists generally, and abusing those who defend a common practice, does not in any manner assist toward its solution.

I find in going over the literature that has been produced since I read my paper a few weeks ago, that the positions taken by me were incorrect. I now find that the medical profession is not honest; the family physician is a rogue, looking for a chance to sell his patient to the highest bidder; the surgeon, outside the "best man", is a butcher and a thief, who merely excises the sick man's purse. As one correspondent from my own city puts it—incises merely to get the fee.

This recent interpretation of the medical profession is the antithesis of my own. I may be in error, but I would rather be wrong and think of my profession as honest, honorable and upright, than be right and think ill of it.

It is asserted that the family physician can not be trusted if there is anything in the operation for him.

Is the surgeon made of any better stuff than the physician? Will he not operate just to get the fee, and will he not do it just twice as quick when all the fee goes to him? Eliminating the family physician does not mend the conscience of the surgeon. Yet the editorial writer says, "We think it clear that the family physician will be eliminated when it comes to special things and the patient will make his own arrangements with the specialists."

And this brings us directly to the point at issue.

Whose patient is it? Who controls the patient, the family physician or the surgeon?

In every case, and always, the family physician. And he always will. The specialist is the assistant of the family physician, and not the family physician the assistant of the surgeon, or specialist. The specialist depends wholly upon the family physician, and the family physician not at all upon the specialist.

As a former president of the Iowa State Medical Society puts it: "I am the family physician. My patient must be operated. I know what is needed but I do not operate. I know a number of good sur-

geons—good mechanics—any of whom will do equally good work. It is purely a mechanical piece of work, just an expert job of plumbing would do. I call up one of these men and his terms do not suit me. I call another and we agree. Now remember, these men are all first class. I know the good men and I keep among them. It is my patient and I am responsible for results.”

Now, is this an impossible proposition? Say the patient is at Le Mars. Besides the profession at Le Mars there are four or five, and perhaps more, surgeons in Sioux City that are closely matched as so many pears. Then Cherokee, Sheldon, Carroll and a number of other towns can supply good men, all within calling distance of the patient.

The problem is a difficult one. Throwing bricks and calling names are not going to solve it. Unless we are broad enough to concede that both sides are honest and are struggling to get an honorable and fair solution of the question, a solution which applies to all, we will continue the brawl until the public steps in, and, through legislative action, settles a matter in our profession which we ourselves have not had breadth of mind sufficient to settle.

In regard to a circular letter referred to, and quoted, in the last issue of the Journal of the Iowa State Medical Society, a word of explanation to the profession of the state is due.

It must be very evident that in discussing intelligently any subject of the character of “Division of Responsibility in Referred Cases.” We must know absolutely the conditions as they exist in Iowa. There is but one way to get this information. I am perhaps in as good position to get this correctly as any physician in Iowa.

While, ordinarily, I do not approve of methods that are not in the clear every moment, very plainly no information of any value could be derived except it were temporarily under cover.

Two hundred letters were sent into various parts of the state, about equally distributed in all portions.

That was not a wide open fee-splitting proposition and would, in all probability, be accepted where the latter would not, and yet it was so close to it that no one could fail to read between the lines.

I had at the time under contemplation, the selection of medical examiners for the rejection of advanced cases of tuberculosis as we do not wish longer to admit them. This work is going forward at the present time along lines that are not open to question. These two hundred letters were used, without any prejudice to any physician, for we know, and this method has positively demonstrated, that the best men in Iowa are dividing the fee. Many of these same men will be asked to examine for us without any regard as to whether they answered the letter at all or not, or as to how they answered it. They are all my friends and will be equally pleased with the rest of

the Iowa profession to know just how the test showed up. In response to this circular letter results were as follows:

109 paid no attention to the letter in any way. 24 suspected the letter not genuine. 2 protested strongly against it. 65 accepted it.

A second letter to the two protesting brought no further response. I had hoped for fuller argument as I desired the fullest expression possible from an actual situation which appeared to exist.

I believe the percentages above shown prove the actual situation in Iowa as nearly as we can get it. The fact that a majority did not reply at all does, not mean that they were opposed to the plan. Two men were decidedly opposed to it.

It may, from this showing, be definitely concluded that at least 50 per cent of the Iowa profession is not averse to division of the fee.

Under present conditions, and realizing more fully than ever before the extent of this condition, I favor the division of the fee for all No profession, more than any nation, can exist "Half slave and half free." The method adopted may be open to criticism but I fully believe that the end attained fully justifies the means.—J. W. Kime.

Secret Division of Fees.

The secret division of fees belongs to a beginning era of decadence when the chimes are ringing for the closing exercises of families, and when the most beautiful apartments in the cities are built for the double roses of culture which are no longer able to propagate their kind; but thank God the ideals of our profession are ideals of intellect, ideals of character, ideals of utility and of goodness. We shall always have teachers at the head of the profession who represent such ideals, and there will always be a sufficient number of these to inspire our young men. There will always be William McClures in abundance as well.—Dr. Robert T. Morris in *New York State Journal of Medicine*.

The Division of Fees.

One of the most vexatious problems confronting the profession today is the secret division of fees between the operator and the referring physician, and the mass of matter being written on the subject, practically all condemnatory of the practice, shows the prevalence of the practice.

Stripped of the surrounding features, these cases are reducible to simple lines.

Any secret arrangement for fee division between physicians is to be condemned for the very reason that it is secret and that the participants do not want the division to come to the knowledge of the patient.

The patient pays the money and has a right to know who it goes to and for what he pays. Any other arrangement is lower than com-

mon commercialism (somewhat similar division of fees or rebates of rates as in railway matters is even prohibited by law.)

Fee division must always face the suspicion of giving work to men who cannot secure it except by underbidding their fellow operator or of giving it to those who fear to allow their work to stand on its own merits.

The division of fees or knowledge on the operator's part that the referring physician expects a reward for bringing the patient to the operator is almost sure to produce unnecessary and useless surgical work for the operator in order to hold the work of the physician will allow his judgment to become clouded and do the patient oft times an injustice in operating. These practices will necessarily blunt the conscience of both parties eventually to the extent that they no longer occupy the judicial position a physician or surgeon should occupy.

No physician or surgeon should allow himself to do anything in way of splitting his fee or rebating that he would not willingly have his patient have full and complete knowledge of. It is questionable if ever a joint bill should be rendered; each man in the case should stand on the high plane of respectability; render a bill for the services rendered and insist on payment, any other system savors too much the tipping system among boot blacks and cab men and reduces the participants to a position they would be ashamed to be found in by the public.—*Journal of the Oklahoma State Medical Journal*.

The Secret Division of Fees.

At a stated meeting of the New York Academy of Medicine, held on October 5, 1911, the following resolution was adopted by the Council on May 24, 1911 and it was unanimously voted that this resolution be endorsed by the Academy.

Resolved.—That the secret division of a fee or fees with any person or persons who may be instrumental in influencing a patient or patients, to apply for operative care or professional advice, is unworthy of any member of the medical profession.

Resolved.—That if such a division of fee is made by a member of the New York Academy of Medicine, it should be counted as a sufficient ground for expulsion of the member.

Resolved.—That the Council consider it its duty to investigate charges against members made on the basis of such division of fee, and on receipt of proof of offense, the Council may either permit the resignation of the person or expell him from the Academy.

(Signed) William M. Polk, M. D. Pres.

John H. Huddleston, M. D., Recording Secy.

New York Medical Journal, Oct. 21, 1911.

Conference on Medical Education.

The 8th annual conference of the Council on Medical Education and Council on Health and Public Instruction was held at Congress Hotel, Feb. 26th and 27th. Most of the state medical societies, the State Boards of Health, and medical colleges in the United States were represented. Chairman Bevan of the Council on Medical Education made his report. The recommendation so far as entrance qualifications, are practically the same as in former years. It was generally believed that one or two years of college work in biology, chemistry, and physics, should be added to the four years High School course as a minimum entrance requirement. There seemed to be a feeling that it was better to extend the medical course rather than to extend the preliminary requirements and that either one or two years of college work would be sufficient. Dr. Bevan was emphatic in his expression of the opinion that a liberal salary should be paid to laboratory professors, that the clinical professors should be paid a salary sufficient to make the work attractive and relieve the professor of the necessity of doing private practice, which would conflict more or less with the college work. It was generally believed that it would be desirable that the clinical professors should be engaged in some private practice as that would give them a wider range of experience which might be made valuable to the students. It was held that the clinical professors should have a continuous hospital service a number of assistants depending on the size of the classes of course, would carry out the details of the work and keep the students in line with history taking, laboratory findings, etc, all under the direct supervision of the professor. It did not seem necessary that the hospital should be under the direct control of the university but that contract arrangements with public hospitals should be made that would enable the medical school to obtain the advantages of a close clinical relation and bedside study of cases, and that the faculty of the medical school should constitute the staff of the hospital. In this connection, Prof. Reuben Peterson of the University of Michigan, read a very valuable paper on the addition of a hospital year to the medical college course. He advocated the standardization of hospitals that desired to avail themselves of the advantages of an intern or interns.

Attention was called to the fact that a large number of hospitals are poorly equipped and organized, that service in such a hospital would be of no avail to the student and it would be an actual loss of time to him to give a year's work under such circumstances. It was held that it would be necessary for the Council on Medical Education to carefully inspect the hospitals making the same investigation that they now make into the equipment of medical colleges, and when it was found that a hospital was able to give valuable

clinical instruction, it could then be placed on the eligible list. It was held that a hospital should be well equipped with a laboratory, including, of course, an X-Ray outfit and other things that go with a careful scientific investigation of cases and its aids to diagnosis. The hospital should also have a working library which will enable interns to avail themselves of medical literature in connection with their hospital work. This paper was discussed by Prof. J. B. Murphy of Chicago, Prof. Victor Vaughn of the University of Michigan, Prof. Means of the University of Ohio and Prof. Schultz of Washington University, St. Louis. Dr. Murphy was very emphatic in his statements in regard to the desirability of a better organization of the hospitals; that these institutions were really public utilities and should be required to raise their standards of work to a reasonable degree of efficiency, and that the standardization of hospitals would be of very great advantage to the public who patronized these hospitals without adequate knowledge of their present shortcomings, and that the making of hospitals a part of our medical professional course of instruction, would be of very great advantage to all concerned. Prof. Vaughn contended that it would be an absolute loss of time to a student to spend a year in many of our hospitals which have very little regard for the present requirements of medical work, and that it was necessary before the 5th or hospital year became a standard requirement, that a careful investigation of hospitals be made and that they be classified according to the recommendations made by Prof. Peterson, into A. B. C. classes, and unclassifiable. The university of Minnesota has already adopted this 5th year and the students entering the past two years have been admitted under this plan, and these classes with all future classes, will be required to take a hospital or intern year. They are now at work on this matter in Minnesota. It will be readily seen that there are not enough hospitals in the cities where the colleges are located to furnish the facilities for all the graduates and therefore it will be necessary to send students to other cities in the state or outside the state, to make this requirement effective. It must be provided that diplomas are held back until the 5th or hospital year is completed. No definite action was taken as to this 5th or hospital year by the Council, but there was no difference of opinion as to its being one of the requirements that would be made in the near future.

Mr. Frederick G. Hallett of London, England, delivered a lengthy address on the method of conducting examinations by the Royal College of Physicians and Royal College of Surgeons of England.

The Council on Health and Public Instruction, listened to a very valuable paper by Dr. Cressy L. Wilber of Washington, D. C., on the present status of vital statistics, and Dr. Arthur M. Hume of Owosso,

Mich., presented a very interesting paper on Railway Sanitation, from the standpoint of railroad management. This paper was discussed by members of different Boards of Health and by others with the final conclusion that it was undesirable to recommend any legislation touching these matters until definite information had been gathered so as to enable legislative bodies to pass intelligent laws governing this subject. A resolution was adopted that a committee be constituted by the Council on Public Health consisting of two secretaries of Boards of Health, two Chief Surgeons of Railway Companies and two Presidents of Railway Companies, to report next year. It was made very apparent that an immense amount of good had been accomplished by the Council during the past five years in improving the condition of medical education and public health matters.

Dangerous Surgeons.

W. K. McCoy, M. D., Gumspring, Virginia, (Old Dominion Medical Journal). It is common knowledge that the operative i. e. the spectacular part of the surgeon's work makes the strongest appeal to the lay mind; and too often to the professional mind also. To be a "fine operator" is supposed to be synonymous with being a great surgeon, not only by the laity, but the rank file of doctors. Nothing could be wider of the mark. Indeed, manual dexterity and operative technique are the least of the attributes of the master surgeon.

The highest intellectual faculty is judgment, and the greatest of all the surgical faculties is surgical judgment. In the hands of its possessor our lives are as safe as human wisdom and precaution can make them; in the hands of the imitation surgeon we are in jeopardy every hour.

The man who lacks the trained judgment and poses as a practical surgeon—no matter if his fingers are facile—is a thoughtless and dangerous adventurer whom all good men should disapprove and wise men should shun.

The really competent men in the field are few, relatively and actually, but the impudent imitators are many and at their hand lies most of the responsibility for the disrepute into which surgery has fallen with many of the laity. Many people remembering the acquaintance or relative who was operated upon and died, or more often was nothing better; and being unable to distinguish between the real and the spurious surgeon, will decline or delay operation for readily curable surgical diseases until they have become inoperable or proved fatal.

Let us press the argument, Doctor. You may be content to send your patient, who knows no better than to trust you, to your class-

mate, kinsman, or friend, who aspires to cut, and let the ignorant victim take his chances.

But when you find yourself or one of your family with a surgical disease, will you go to your third rate friend or to the acknowledged master? If you say the former, you compel us to doubt either your veracity or your sense. If the latter, we should like to ask you by what right you give the patient who pays you to advise him, a poorer chance than you would choose for yourself? It is high time for this sorry and dangerous business to stop, but it will be stopped only when the rank and file of the profession place the stamp of their disapproval on the smug egotist who have made the Temple of Science a house of merchandise. (Alas, alas, many cases these days are "referred" to the operator for no other reason than that he is known to be a man who divides the fee, which the better surgeon and more honest man will not do. The honorable practitioner will not refer a patient to a surgeon whom he will not be willing to have operate on his own wife or child.)—Editor West Virginia Medical Journal.

Co-operation as a Factor in the Prevention of Typhoid Fever.

Dr. L. L. Lumsden, Passed Assistant Surgeon, Hygienic Laboratory U. S. P. H. and M. H. Service, Washington, D. C., in a paper read before the Ohio State Medical Association, presents some suggestions which are so much in line with what our own Sec. Sumner has urged, that we take the liberty to offer some of the points made, for the consideration of the profession in Iowa.

"Between the fields of activity in the prevention of disease there should be no twilight zones. Within a state the local officials in neighboring communities should co-operate with one another, and all should co-operate with the state officials. Between the states there should be co-operation, fostered and aided by the national officials. Much typhoid fever in the United States is still caused by water-borne infection which could be done away with by reasonable and equitable co-operation between cities and between states, for control of sewerage pollution of streams and lakes."

"As a rule the physician who attends the patient is the first to determine the nature of the illness. Having the earliest information, his is the responsibility to get carried out the necessary precautionary measures to safeguard the family and the community against the spread of infection from the patient. Ethically his duty is just as clear as in that of a man who discovers a fallen railway bridge before a rapidly approaching train. The physician may hold that the duly appointed health officer has the responsibility for the prevention of typhoid fever in the community; likewise the man at the railway bridge may hold that the railroad company is responsible for the condition of the track."—Ohio State Medical Journal.

Harvard to Have a Medical School in China.

Plans for the erection of a medical school in China have been under consideration for about three years. Dr. Martin R. Edwards has just returned from a seven months stay in China, where he was sent for the purpose of studying conditions to determine what place in China it would be best to start the school, there being at present but one fairly well trained physician to every 400,000 population. Two-fifths of the sum of money necessary for this project has been contributed by the Legislature of Oregon, Washington, and California, those states being particularly interested in preventing the coming of cholera, bubonic plague, and other oriental diseases of the Pacific ports. The school will be located at Shanghai, probably within eight months.—Texas State Journal of Medicine.

The X-Ray In Court.

A decision of the Supreme Court of Missouri in relation to X-Ray evidence, puts a degree of value on X-Ray pictures as evidence that it not wholly in accord with the facts and if this is to be the accepted rule, much injustice will be done. The Supreme Court says: "The art of making photographs of the bones of a living man by use of the X-Ray is yet still more in keeping of science than the art of common photography, but that fact only requires more care in laying the foundation for the introduction of such photographs; it does not exclude them from evidence." The case was an appeal from the lower court which overruled a motion of a defendant railway company for an order of the trial court to compel the plaintiff to submit himself to an examination of disinterested surgeons and also to have X-Ray photographs made of his alleged injured parts. This latter part of the motion was overruled "because the court was advised that sometimes the subjecting of a person to that process resulted in danger to him. X-Ray pictures were offered by the plaintiff in evidence taken by a physician who testified that he owned an X-Ray machine and was familiar with its use and operation; that he examined the plaintiff with it, taking observations of both hips, etc." These pictures do not appear to have been satisfactory to the defendant, the Supreme Court said. "It was not error to admit those photographs in evidence. Even on the theory of the defendant that such a picture is in itself not evidence but only serves as a memorandum to assist the expert witness in his explanation, the pictures were used to illustrate the scientific explanations of the witness."

This decision was no doubt sound from the law point of view, but from a medical and scientific point of view, it does not appear that sufficient safeguard was placed around the X-Ray exhibits to determine if the radiographs were prepared with scientific accuracy and with properly adjusted apparatus. It is well known that many

physicians without proper training and with quite insufficient apparatus make X-Ray photographs which are misleading and tend to confuse men even versed in anatomy and surgery to say nothing as to the ability of a jurymen to make them out. We are quite sure that a surgeon would dread to go into court in a malpractice suit to be confronted by X-Ray pictures which we have seen of a fractured limb in which a most careful physical examination could find nothing wrong with the union.

The California Supreme Court is even more liberal in admitting X-Ray photographs as evidence. The court says "While it would have been better no doubt, to have introduced evidence of the familiarity of the physicians with the process of X-Ray photography and the methods employed in preparing these particular exhibits, the Court cannot see that the omission so to do amounted to error necessitating the reversal of the cause. The witnesses were qualified surgeons. It is well known that the X-Ray is almost universally understood and used by all surgeons of the present day in examining injuries. Doubtless the Court required less preliminary proof from such witnesses than would have been exacted from laymen."

The case referred to by the California Supreme Court was the case of Kimball vs. Northern Electric Company and related to an injured knee. Certain X-Ray photographs were introduced in evidence after two of the medical witnesses had been examined in reference to them.

The above is a fair exposition of the views of the higher courts in relation to X-Ray exhibits as evidence. We cannot well deny the correctness of the court's view on this question, but we should be extremely cautious in exploiting X-Ray evidence for partisan purposes. We have seen two sets of plates exhibited in an illuminating box in a court room said to prove opposite conditions, but so far as we were personally concerned, we could see no difference in them and imagined that the court and jury were not much better off. The position, we, as medical men should take is that X-Ray evidence is of little or no value, indeed is often misleading, unless furnished by one trained in the work. It is better to aid in fixing the rule of the courts on a safe basis because it is liable to come home to us in a malpractice suit. What is more important still is the necessity of a careful study of X-Ray examinations and the employment of radiography in all of our bone and joint work. The public will demand this and will not excuse us for not employing the X-Ray except in exceptional cases. In small towns and in country practice this method of examination is impracticable and the court will no doubt excuse us for a failure to employ this most valuable, and in joint fractures, indispensable means of diagnosis.

Nostrums in North Dakota.

The Bulletin of the North Dakota Agricultural Experiment Station for November contains exposures of many nostrums. We mention: Toris Compound a "prescription fake", each package selling for 50 cents, and containing about 1-8 oz. sodium salicylate, 1-8 oz. saltpeter and 3-4 oz. sugar worth about 1 cent. Dr. Green's Improved Compound of Sarsaparilla, a "cure-all" said to cure about forty diseases. The nostrum had the characteristics of a weak aqueous infusion of gentian and is held worthless and illegal. Pape's Cold Compound, a nostrum advertised by the "reading notice" method, is reported to contain in each tablet acetanilid 1.6 grs., phenolphthalein 1.8 grs. and sugar 8.0 grs. Calocide Compound is advertised as a cure for corns, callouses, bunions, etc. It is reported to contain borax 13.5 per cent., salt 24.0 per cent., alum 38.0 per cent. and tannic acid 0.1 per cent. Eilert's Extract of Tar and Wild Cherry is advertised as a "sure cure for consumption, asthma", etc. It was found to be an ordinary cough syrup containing tar, wild cherry and licorice. Red Raven "Splitz", a widely advertised purgative, was found to be essentially a solution of sodium phosphate. (J. A. M. A. Dec. 23, 1911, p. 2079).

Railway Accidents.

In the Journal of the American Medical Association, a very fair editorial on railway accidents may be found under the "Caption of Human Fallibility", and in the same journal, page 1410, (May 13th, 1911) an interesting letter from Charles E. Kern, assistant to Director Bureau of Railway Economics, Washington, D. C.

We feel justified from long experience in saying that a very large percentage of accidents are due to a disregard of orders and to a lack of watchful care on the part of employes, and to these may be added an uncertainty as to just where the line of duty lies. We are quite sure that railway companies endeavor to secure the best men available for the different branches of work but the employee may not quite know how much is expected of him, or if he has any responsibility beyond his specified line of work. The railways have certainly been derelict in their duties to the public in not establishing schools of instruction for the purpose of distinctly impressing upon the employee the full range of his duties and responsibilities. It is true the new man is given a book of rules which he is supposed to learn and is expected to pass an examination from time to time, especially when he seeks promotion; but this is much like educating a medical man by the use of quiz compends or the educating a soldier by studying books on tactics. There is no more responsible employment than that of a railway servant and there is no calling that needs a better training. The rule apparently is to set the man to

work and let him find out his own way. He probably becomes expert in the limited technic of his own service but nothing more. Very recently, however, important steps are being taken in the direction of efficiency and safety. To Ralph C. Richards, Gen'l Claim Agent of the Chicago and North-Western, this is in large measure due. Mr. Richards belongs to the highest type of railroad officials. His generous nature revolted at the loss of life and the suffering caused by the short-comings of railway employes who failed, not intentionally, but from want of proper training.

The plan of this work is to interest first the local officials, then the men, by lectures by the Chief Claim Agent; after this, men are selected from each class of service—for instance—a conductor, brakeman, switchman, shopman, agents, etc., at each division station. At stated times these men who taken together constitute a "Safety Committee" are taken over the road in an office car with the Chief Claim Agent and the local officials, and are given practical instructions in their work. The Safety Committee is shown what each man can do to lessen the danger of his employment to himself, his co-employes and to the traveling public. He is instructed to exercise constant watchfulness and to notify at once the proper officer everything that he sees is not just right about engines, shops, yards, cars, stations, etc. Each member of the Safety Committee is required to make reports of his findings at stated times and to forward them to a "Central Safety Committee" made up of general officers. This serves as a check on the local official if he neglects to perform his duty when his attention is called to a matter by a member of the local Safety Committee. To prevent timidity on the part of a local committeeman, immunity is granted against discipline for calling attention of a higher officer for anything that is apparently wrong. The results of this work has been surprising. During the past year, under this plan of safety, the number killed and injured among employes on the North-Western road has been reduced more than 2200 over the preceding year, with practically the same number of men employed. This work on the North-Western together with the introduction of the Red Cross for first aid on the Rock Island under the direction of Chief Surgeon Plummer, should receive the highest commendation by the general public.

We are also informed that the C., B. & Q. Ry. is taking up the "Safety Committee" plan of guarding against accidents.—D. S. F.

The Embalmers Journal.

We have before us the December number of "The Embalmers' Monthly" published in Chicago, a beautifully printed and illustrated large page magazine of 64 pages, devoted to the interests of the embalmers and funeral directors. The printing the paper and the general get-up of the magazine is better than anything we have seen

among the medical journals. The work of the undertaker has nothing very attractive in it as it would appear to most people, but the assumption that it is nothing but a trade is far from the fact; it is really a scientific profession, as one would be readily convinced from reading the number of the periodical above referred to. In the number before us, are papers from several well known names; among those well known in Iowa are W. P. Hohenschuh, Dr. G. H. Sumner, Secretary Iowa State Board of Health and Dr. H. M. Bracken, Secretary of Minnesota State Board of Health.

Dr. Sumner's paper is entitled "Details of Practical Procedure used in Disinfecting Rooms by both Formaldehyde and Sulphur Methods, List of the Standard Disinfectants and How to Make Them." The paper is well illustrated and well worth reading. It contains the kind of information that everyone interested in this subject should possess.

High Blood Pressure.

Dr. Oliver T. Osborn of Yale University made some very interesting remarks before a recent meeting of the Medical Association of greater New York on high blood pressure.

Why is it that cardiovascular and renal diseases are so much on the increase at the present day? Apoplexy is getting younger men, weak hearts are more in evidence, and Bright's disease is increasing. Old and young alike are in both mental and physical competition. Day after day one rushes from one appointment to another. One ate too much meat and drank too much water, while less alcohol is indulged in than formerly, more tea and coffee are consumed. Consequently more caffeine is taken into the system and this is a cerebral irritant. Blood pressure might be lowered by means of rest and a milk diet. Normal blood pressure is principally the result of the suprarenals, and, to a less extent of the pituitary body, while the thyroid and most of the secretory glands have the effect of lowering the pressure. With abnormally high pressure one would have such symptoms as increased urination, flushings, etc., indicating the beginning of cardio-renal disease. When the blood pressure is too high what should one do? Not too much. The pathological process could be arrested if taken in time. The patient should be ordered to take rest, the quantity of meat eaten should be reduced, and intestinal putrefaction should be looked after. Frequently a small amount of thyroid, not more than two or three grains a day would be of service, or one might give a little nitroglycerine 1-200 gr. or 1-400 gr., two or three times a day might be sufficient; just enough to relieve the symptoms.

Journal of the New Jersey State Medical Society.

Cure of Fistula in Ano Without Injury to the Sphincters.—K. A. J. Mackenzie, M. D., Portland, Oregon.

Dr. Mackenzie proposes an ingenious method of treating fistula in ano so as to restore the tissues to their proper position and gives two illustrations of extreme cases.

1st. The patient is prepared in the most careful way as for any major surgical operation on these parts.

2nd. The sphincter is completely dilated.

3rd. The internal orifice of the fistula is minutely examined and with a proper instrument is very cautiously dilated. After dilatation the mucosa is uplifted and pared with curved scissors in the direction of the long axis of the bowel and with a small knife or fine scissors the circumference of the muscular layer is then trimmed and vivified. If need be, the opening may be incised or split in the direction of the circumference of the sphincter, tied and divided. The mucous membrane is then sutured with interrupted chromic catgut or silk sutures, properly spaced. If more than one orifice exists, of course the same procedure is followed.

4th. A flap is made on the side involved, beginning by making a small semilunar incision just beyond the border of the external sphincter, dividing the parts down to the fistulous track, the latter being divided flush at its point of emergence from the bowel. The incision is extended from both ends of the first incision outward and made large and deep enough to include, if possible, under the eye, all available and accessible branching tracks. The case may require sometimes the lifting of one or other of the buttocks in its entirety. In one case, already referred to, it was necessary to make a complete flap and partial resection of both buttocks in order to reach the deepest and most distant branching track.

5th. The opposite side of the rectal opening is not attacked and after all doubtful tissue have been removed, the rectal walls are infolded once or twice over the line of suture within. The greatest care must be exercised in removing all doubtful tissues. If need be, the cautery could be used for their complete destruction or substituted entirely for the suture of these parts.

6th. The exposed flap is next attacked with knife or large pointed scissors, curved on the flat and the original track and its branches, and the entire fistulous zone, including every branching track, resected. Careful search will be made in the ischio-rectal fossa and peri-rectal spaces for any concealed tracks.

7th. The whole field is then carefully flushed with normal salt solution, and if need be antiseptized and the flat layers sutured with buried catgut so as to close all dead spaces. In many cases the entire wound may be closed as in the case of breast amputation, or a small drain may be left for twenty-four or forty-eight hours."—*Northwest Medicine*, Nov., 1911. *Annals Surgery*, Sept., 1911.

Dr. C. U. Collins of Peoria, Ill. makes some very opportune remarks on "A Technic for Supra-vaginal Hysterectomy" in a paper published in the Illinois Medical Journal.

"I wish to state here and emphasize that the surgeon alone cannot carry out all the details of the technic no more than the star of a theatrical company can place a drama on the stage unassisted, or the leader of an orchestra can produce a musical composition without the aid of the different players. The surgeon must have trained assistants and the surgeon and these assistants must practice together many times before a technic is carried out correctly. For this reason the family physician of the patient should not seek to take a part in the operation. This is no reflection on his training experience or capabilities. It simply means that he has not had the opportunity to practice with the team, and therefore cannot carry out a part of the immediate operative technic with the deftness and precision of the practical assistants."

The surgeon should be trained and experienced in the technic employed if a finished and correct technic is to be attained. I have often said that knowing what I know now, if I were to be operated on, I would choose my surgeon and let him take me to the hospital he wished. He would know where he could do his best work. Again, this would be no reflection on any other hospital, but he would know where the operating room nurses had had the most training and practice in carrying out his technic.

Verdict Against a Hospital Reversed.

A verdict of \$30,500 received by a bicyclist, who was run down and injured by a St. Johns' Hospital, Brooklyn ambulance has been set aside by the Court of Appeals of New York, which finds that the driver of the ambulance was the servant of the keeper of the livery stable, and not of the hospital, and that the hospital therefore was not liable in spite of the fact that a hospital surgeon was in the ambulance at the time, since the latter was not shown to have participated in the driver's negligence.—Journal Medical Society of New Jersey.

Ischemic Myositis, Ischemic Paralysis, or Volkman's Contracture.—F. T. Fort, M. D., Louisville, Ky., Volkman. Diseases of Locomotion.

"The severe contractures of the hand after the application of too tight bandages upon the forearm in cases of fracture, depends largely upon an inflammatory contraction of muscles and not upon primary nerve paralysis, the result of pressure. We know that these cases of greifenklane (main en griffe) claw-like stiffness of the fingers, offer a most hopeless prognosis; the flexed contracture of the fingers and of the wrist persists in spite of all imaginable efforts,

such as electrical treatment, passive motion, and forced extension under anesthesia; even amputation has been resorted to in extreme cases. I have never seen a complete cure and not even a satisfactory improvement, and once only a slight amelioration of the stiffness after long continued painstaking exertions on my own part.

The contracture in these cases occurs rapidly, and in a few weeks has reached the highest degree, which may cause ulcerating gangrene in the palm of the hand from the pressure of the finger nails. In case of paralytic contractures following apoplexy or nerve lesions, contracture is never observed in so short a time. In spite of these facts, the physician who has the misfortune to apply too tight a bandage, very commonly resorts to all kinds of passive movement and attempts at extension of the contracted fingers upon all kinds of splints."

These unfortunate results from the treatment of fractures of arms and legs, especially of the forearm, are not as frequent as formerly but they are not entirely unknown even today. The history of malpractice suits is full of illustrations of Volkman's paralysis from too tight bandaging.—*Railway Surgical Journal*, Oct., 1911.

Homeopathic College Merged.—The board of education of Iowa has merged all the chairs of the College of Homeopathic Medicine with those of the College of Medicine and Surgery of the State University of Iowa excepting two chairs, one of homeopathic medicine and the other homeopathic materia medica and therapeutics.

Of fakes, frauds and charlatans there is no end. Such always has been, and such it always will be. Now we have with us Vimedia with its agents. It is a cure all for every ill which affects woman-kind—makes menstruation, parturition and the menopause painless and without nervous manifestations, cures lacerations by absorbing scar tissue, removes tumors; etc. The method of introduction is on the same plan as that of Viavi. A woman—usually an M. D.—comes to town, gets to lecture in a church or rest room, tells women all manner of suffering is her share, and the only cure is Vimedia—price \$23.00. We suggest that physicians keep a watchful eye on these charitably inclined females who thus desecrate public meeting places. There are so many things which would be no nice if they were only true, and Vimedia is one of them.

BOOK REVIEWS

Recent Methods in the Diagnosis and Treatment of Syphilis: (The Wasserman Reaction and Ehrlich's Salvarsan, "606"). By C. H. Brown-ing, M. D., Lecturer on Bacteriology in the University of Glasgow, and Ivy McKenzie, M. D., Director, Western Asylums' Research Institute, Glasgow. Octavo, 303 pages. Cloth, \$2.50, net. Lea & Febiger, Publishers, Philadelphia and New York, 1912.

The demonstration of the specific organism—the spirochete pallidum—in luetic lesions by Schaudinn and Hoffman in 1905, the discovery of the serum reaction by Wasserman, Neisser and Bruck, in 1906, and the introduction of salvarsan as a therapeutic agent by Ehrlich in 1909, together constitute a chapter of events of unusual interest in the history of medicine.

This book by Scotch authors is a record of original work in diagnosis and treatment of syphilis.

The book goes most thoroughly into the sero-diagnosis, the first 149 pages or Part I being devoted entirely to this. The text is ample yet clear and concise.

The latter half—Part II.—is devoted to the salvarsan treatment, being treated under the headings—Experimental Basis; Chemistry; Review of Literature of salvarsan in treatment of syphilis, relapsing fever, fram-besia; authors observations with salvarsan; accessory effects; and fatal cases.

Each chapter is followed by a comprehensive list of references to the topic under consideration.

Again we call attention to the clearness, conciseness and compactness of this work and it should be in the library of all those who are interested in this class of cases.

On page 224, the importance of the Wasserman reaction is prognosis is outlined. The salvarsan should be repeated at intervals until the serum reaction is permanently negative—C. A. B.

Minor and Emergency Surgery.

Minor and Emergency Surgery by Walter T. Danurenther, M. D., Surgeon to St. Elizabeth's Hospital and to St. Bartholomew's Clinic, New York City. 12 mo. volume of 226 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1911. Cloth, \$1.25.

This little book should be read carefully by every recent graduate and also from time to time by every practitioner who has to deal with minor and emergency surgery. It is full of useful information. We have frequently observed that the young surgeon gives more thought and study to operations than to the surgery which he will have most to do with, at least in the earlier years of his practice. The results in emergency surgery will show themselves so plainly that the reputation of the surgeon may be lost according to the final outcome of the case.—D. S. F.

Nervous and Mental Diseases.

The New 7th Edition. Nervous and Mental Diseases. By Archibald Church, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence in the Northwestern University Medical School, Chicago; and Frederick Peterson, M. D., Professor of Psychiatry, Columbia University, Seventh Edition, revised. Octavo Volume of 932 pages, with 338 illustrations. Philadelphia and London. W. B. Saunders Company, 1911. Cloth \$5.00 net—half Morocco \$6.50 net.

This book has been so long before the medical public that more than

a brief notice is unnecessary. It may be safely said that almost every practitioner who is in any way interested in nervous and mental diseases has read the book and he will no doubt be glad to know that a new edition appeared in Oct., 1911. Several chapters have been largely rewritten and many interpolations of varying lengths have been made. "The section on Mental Disease has been wholly rearranged in accordance with the present trend of classification in America, some matter no longer useful has been left out and much new matter has been added."

It is well to observe that this is not the joint work of two authors but is a book made up of two sections, one on Nervous Disease by Prof. Church, and the other on Mental Diseases written by Dr. Peterson of New York, working independently.—D. S. F.

Microscopy, Bacteriology, and Human Parasitology.

A Manual for Students and Practitioners by P. E. Archinard. Second edition. Price \$1.00. Lea & Febiger, Philadelphia.

This book is of the quiz compend type. As such it may be of service to those who, because of not having recently had a course in bacteriology, desire to review the subject previous to passing certain examinations.

The term "microscopy" of the title is misleading in that it implies that the whole subject of microscopy of interest to the student of medicine is covered, whereas it is limited to bacteriology and a few pages on animal parasites. The subject matter is in general quite well balanced although the general chapter on infection and immunity is too brief. The brevity of the work tends naturally to the making of dogmatic statements. By so doing several important errors have crept in as for instance the statement in the chapter on Glanders that "the tumefaction of the testicle is a true diagnostic sign." No bacteriologist would make a diagnosis on such alone.

The work is of course too brief to take the place of a textbook for the medical student or that of a reference manual for the practicing physician.—Henry Albert.

Physical Diagnosis.

Second Edition, Revised. The Principles and Practice of Physical Diagnosis. By John C. Da Costa, Jr., M. D., Assistant Professor of Clinical Medicine, Jefferson Medical College, Philadelphia.

Second Edition Revised. Octavo of 557 pages with 225 original illustrations, Philadelphia and London; W. B. Saunders Company, 1911—Cloth, \$3.50 net.

Physical diagnosis is of such supreme importance to the practitioner of medicine that we feel sure that every physician and surgeon will welcome this book, bearing on its title page as it does, the family name that has been so long distinguished in the field of medicine. Considering this book on its merits alone, there is much to recommend it. In the first place, laboratory methods of diagnosis are briefly outlined, the essential apparatus described and its application made clear. No attempt is made to carry laboratory methods beyond fairly well established means of clinical diagnosis.

This book needs careful study for the reason that clinical pathology forms the basis for the physical signs and diagnosis. It is not sufficient to remember the significance of certain physical signs alone but to study pathological conditions in connection with the clinical evidence furnished by these signs in order to reach the most logical diagnosis and to direct the most rational treatment. We must heartily recommend this book to the general practitioner who if he has any shortcomings they lies in the direction of accurate diagnosis. D. S. F.

Progressive Medicine.

A Quarterly Digest of Advances and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Prof. of Therapeutics and Materia Medica, Jefferson Medical College, Philadelphia, assisted by Leighton F. Appleman, M. D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. Lea and Febiger and New York. Price \$6.00 per annum.

This is Vol. 14 of the well known quarterly digest of progress in medicine and surgery. There are five well known contributors who cover the recent discussions and advances in relation to the surgery of the Head, Neck, and Thorax, Infectious Diseases of Children, Rhinology and Laryngology, Otology. Works of this character supplement the text books and monographs by bringing up to date questions which could not be finally settled and by adding such new things as are worthy of serious consideration.—D. S. F.

Ophthalmic Myology.

A systematic treatise on the ocular muscles, by G. C. Savage, M. D., of Nashville, Tenn. A book of nearly 700 pages with 84 illustrative cuts and six plates, published by the author at 137 Eighth Ave., N., Nashville,

This is the second edition of this valuable book and is completely rewritten and all possible new material added, a number of new illustrations have been added. By means of the author's muscle indicator, fully described in Chapter 1, the author establishes the fact that the center of the macula is the posterior pole of the eye; and that all indirect visual lines cross the visual axis at the centre of retinal curvature. This is directly opposed to the teachings of Helmholtz.

The fundamental principles of ocular rotations are given ample space in Chapter 1.

The various muscular imbalances are freely and fully described and the illustrations are well selected. The book is exceedingly well printed, good type and pure white paper. We recommend the treatise to all those engaged in refractive work.

PROGRAM STATE MEDICAL SOCIETY.**SIXTY-FIRST ANNUAL SESSION.**

Burlington, May, 8, 9, 10, 1912.

HOTEL BURLINGTON HEADQUARTERS.

General meetings will convene at 9 a. m.; 1:30 p. m. and 7:30 p. m. in the Congregational church.

House of Delegates will convene:

Wednesday, May 8th, at 8:30 p. m.

Thursday, May 9th, at 8 a. m.

Friday, May 10th, at 8 a. m.

Council and County Secretary will meet Tuesday evening, May 8th, at 8. p. m.

Iowa Medical Women will meet Tuesday, May 7th.

Local Committee on Arrangements., C. P. Frantz, Chairman.

The local committee is arranging generously for the entertainment of members and their ladies, including auto rides, moving picture films, illustrating scientific problems, and a river excursion for all members and guests.

COMBINED MEDICAL AND SURGICAL SECTIONS.

Section on Medicine—Chairman F. A. Ely, Des Moines.

Section on Surgery—Chairman H. B. Jennings, Council Bluffs.

Wednesday, May 8th, 9:30 a. m.

1. The Molding of Public Opinion Regarding the Care of Epileptics—Wm. Pfannebecker, Sigourney.
2. Early Diagnosis in Mental Diseases—Lena Beach, Cherokee.
3. Congenital Syphilis—How it may be Recognized and best Treated—G. S. Browning, Sioux City.
4. The Diagnostic Value of Tuberculin with Respect to its Various Modes of Application—E. H. Dwelle, Northwood.
5. Major Surgery Outside of a Hospital—J. L. Augustine, Ladora.

Surgery outside of a hospital: Surgery should be done in a hospital when possible; hospital facilities in Iowa are insufficient. The County Hospital. Some patients can or will not be removed to a distant hospital.

Operations outside of a hospital are often necessary. There are difficulties that can be over come. Results are good. Every general practitioner should specialize in something.

6. The General Practitioner and Surgery—Edw. Hornibrook, Cherokee.

The Surgical operations which the general practitioner is compelled to undertake, the difficulties of some of these operations and the training and equipment which he requires.

Wednesday, 2 P. M.

7. Address of Chairman, Medical Section—F. A. Ely, Des Moines.
8. The Peritoneum—Chas. B. Taylor, What Cheer.
9. Right Rectus Incision for Appendicitis in Females—J. R. Guthrie, Dubuque.

Right rectus incision for appendicitis in the female. It enables the surgeon to examine and treat both ovaries. Right tube and ovary frequently involved in appendicitis. The incision, a good one if not the best. Operation easy and results satisfactory.

10. Address on Medicine—The Movement for Exact Treatment—Dr. Geo. Dock, St. Louis, Missouri.
11. Etiology and Pathology of the Chronic Arthritis—Wm. Rendleman, Davenport.
12. Prophylaxis and Non-Surgical Treatment of the Chronic Arthritis—C. F. Starr, Mason City.
13. Arthritis Complicating Scarlet Fever, With Report of a Case—E. T. Edgerly, Ottumwa.
14. Clinical Importance of the Sequelae of the Infectious Diseases of Childhood—M. J. Moes, Dubuque.
15. The Differential Diagnosis and Treatment of the Hemorrhagic Diseases of New Born—L. E. Kelley, Des Moines.

Wednesday, 7:30 P. M.

16. Oration on Surgery—A. M. Pond, Dubuque.
17. President's Address—Lawrence W. Littig, Davenport.

Thursday, May 9th, 9 a. m.

18. Address of Chairman, Surgical Section—H. B. Jennings, Council Bluffs.
19. Post Operative Dilatation of the Stomach—C. E. Ruth Des Moines.

Acute dilatation of the stomach is by no means entirely post-operative, nor is it confined to any age, or influenced by sex. Its etiology varies greatly but the most potent primary factor is gastric paresis or reflex inhibition, though the influences of the solar plexus, and splanchnic conduction.

That the crossing of the root of the mesentery is a primary cause of acute dilatation of the stomach is extremely problematical.

The treatment should consist of immediate complete evacuation of all gas and fluid from the stomach, followed by lavage until the fluid returns clear.

20. Diagnosis of Diseases of the Upper Abdomen—D. C. Brockman, Ottumwa.

Most of the errors in the practice of medicine are due to carelessness in diagnosis. In no part of the body is there more erroneous diagnosis than in diseases of the upper abdomen.

The clinical symptoms of most of these diseases of the upper abdomen are sufficiently well understood to enable the average physician to make a diagnosis in a great majority of cases. He may not always make an absolute diagnosis but he can come near enough to advise the patient that the case is one for surgery and should be studied by some one skilled in surgical diagnosis.

My plea is for every doctor to make the best physical diagnosis he is able to in every patient coming to him, complaining with trouble located in the upper abdomen.

21. Chronic Pancreatitis and Its Management—Wm. Jepson, Sioux City.

Consideration of the anatomic relations of the pancreas to adjacent organs and structures and its functions in so far as they have a bearing upon the etiology and symptomatology of chronic inflammations of the organ.

Reason why the condition often fails of recognition till well advanced.

Consideration of its etiology, pathology, symptomatology and management.

22. Oration on Medicine—J. F. H. Sugg, Clinton.

23. Etiology and Pathology of Arterio-Sclerosis—B. L. Eiker, Leon.

24. Clinical Manifestations of Arterio-Sclerosis, other than Cerebral with Suggestions as to Prevention and Treatment—J. Fred Clark, Fairfield.

25. The Use of the X-Ray in the Diagnosis of Heart Disease—W. L.

26. Caesarean Section for Placenta Previa—Donald Macrae, Council Bluffs.

Mortality is central implantation when usual methods of delivery are employed. Mothers 13-26 per cent; babes 50-90 per cent. Mortality in Caesarean operation not yet determined as sufficient statistics have not been collected to base definite conclusion on.

The operation easy to perform by those with operative experience. Indications for this operation usually present themselves in ample time. Suspicious cases should be placed in hospital for observation.

27. Carcinoma of the Cecum; Its Diagnosis—Oliver J. Fay, Des Moines.

The importance of an early diagnosis in cancer is again pointed out and its peculiar importance in cancer of the cecum, owing to the possibility of a successful operation and the fact that met-

astasis does not here occur in the early stages of the disease is especially emphasized.

While an absolute diagnosis may be impossible a "diagnosis of probability" can and should be made, and an immediate exploratory laparotomy is then indicated for the delay occasioned by keeping the patient under observation for some time greatly lessens his chance of life.

Bierring and Thos. A. Burcham, Des Moines.

Thursday, 2 P. M.

28. Address on Surgery—The Treatment of Fractures of the Long Bones—S. C. Plummer, Chicago.

29. Varicose Veins and Varicose Ulcers—H. C. Eschbach, Albia.

Determining, or localizing causes: Historical changes, secondary lesions and complications; hygienic and preventive treatment; radical and operative treatment; different methods, underlying principles of the several operations; obliteration of various trunks, the radical measure.

30. Undescended Testicle—A. L. Wright, Carroll.

31. Cerebral Contusion—Prince E. Sawyer, Sioux City.

32. Physiology and Pathology of the Hypophysis Cerebri—John T. McClintock, Iowa City.

33. Bismuth Paste—J. C. Powers, Hampton.

Bismuth Paste: Its early use; use as a diagnostic aid; use as a therapeutic agent. Substitutes for bismuth paste; septic condition best used in other than tuberculosis; use in tuberculous infections; technic of injections; therapeutic effects of its use; bismuth poisoning; report and illustration of a severe case of poisoning; conclusion.

SECTION ON OPHTHALMOLOGY, OTOTOLOGY AND RHINO-LARYNGOLOGY.

May 8th, 1912, 1:30 p. m.

Address of Chairman—G. F. Harkness, Davenport.

1. Traumatic Injuries of the Cornea—T. U. McManus, Waterloo.

Special attention being given by the author to the use of the Cautery.

2. Contusion of the Eye Ball—Lee Weber, Davenport.

Causes, direct and indirect violence, injuries to the cornea and sclera, iris and ciliary body, choroid, retina and optic nerve, dislocations of lens, intraocular hemorrhage. Complications after effects, prognosis, treatment.

3. Accessory Sinus Diseases—W. W. Pearson, Des Moines.

Upper resp. tract with its connecting cavities. History of our knowledge of the cavities. Time of development. The different cavities, frontal, ethmoidal, antrum, posterior ethmoidal, sphenoidal, and middle ear with special sense organ. Lack of uniformity in the cavities and orifices. Lining membrane. General conditions leading to the disease of these cavities. Remote complications in neighboring structures. Infrequent development of chronic involvement. Malignant optic nerve affections. Different types of bacteria, etc., involved in the process. Some of the operations and cases.

4. Invitation Address—The Widening Boundary of Medicine in its Relation to Otology, Rhinology, and Laryngology—Dr. S. J. Kopetzky, New York.

5. The Pharyngeal Tonsil—B. D. La Force, Ottumwa.

Pocket producing folds of lymph tissue in post nasal space. Acute inflammation of pharyngeal tonsil frequent but often overlooked. Cause of acute otitis media frequently. Mouth breathing children have no conception of normal way to breathe. In ear disturbances adenoids of more importance than faucial tonsils. Advisability of not doing adenoid operations during acute inflammations of ears and respiratory tract. Hemorrhage in adenoid operations, dangers and methods of control. Anesthetic required. Adenotome and curettes.

6. Pathogenicity of Waldeyer's Ring in Relation to Aural Disease—P. R. Wood, Marshalltown.

Ninety per cent of middle ear diseases originate in the pharyngeal vault. Ten percent of adenoid children fail to display definite symptoms. The small adenoid more generally jeopardizes hearing functions. Majority of adenoids imperfectly operated upon. Vicious circle between adenoids and faucial tonsils and turbinates. Necessity of curetting Rosenmuller's fossa to relieve middle ear deafness. Author's curettes.

May 9, 1912, 9 a. m.

7. Eye Strain in Children—Special Reference to Chorea.—F. W. Bailey, Cedar Rapids.

The relation of the visual apparatus with the nervous system. Chorea and eye strain. Percentage of choreic patients exhibiting refractive errors. Report of five cases of chorea cured and two partially cured by properly adjusted glasses. Effect of correcting the refractive error upon symptoms of chorea.

8. Imbalances of the Ocular Muscles—F. E. V. Shore, Des Moines.**9. Submucous Resection of the Nasal Septum—F. Roost, Sioux City.**

Development of the operation and since simplified more frequently performed. Button hole operation versus open dissection and lifting mucous membrane with sharp instruments. Resection without preliminary lifting of mucous membrane. Adaptability of this method to certain cases. Facility of performance and lessening of danger of tearing adherent membrane.

10. The Use and Comparison of Nasal Dressings—W. S. Windle, Oskaloosa.

Composition and merits of various nasal dressings offered in the market. Authors use of ointments in nasal diseases. Recommendations with other drugs to meet therapeutic and allied conditions and acutely inflamed and swollen sensitive mucous membranes.

11. Practical Conclusions from Labyrinthine Studies—E. R. Lewis, Dubuque.

Review of main facts elicited by normal labyrinthine and called reactions. Deductions. Co-relation of vestibular, cerebellar and ocular functions. Cases illustrating departure from normal. Circumscribed and diffuse labyrinthine and retro-labyrinthine disease; of right frontal lobe; disease in distribution of cerebello-spinal tract; multiple sclerosis. Conclusions.

May 9, 1912, 2 p. m.

12. Catarrhal Otitis Media—F. G. Murphy, Mason City.**13. Gastro-Intestinal Auto-intoxication and its Relation to Diseases of the Eye—H. B. Gratoit, Dubuque.**

Limitations of auto-intoxication. Distinguished from auto-infection. Probable cause of various diseases of the eye. Difficulty of

recognition. Treatment by cathartics; intestinal and antiseptics and diet not always satisfactory in ambulatory cases. Necessity of hospital treatment, colonic flushings, etc.

14. Treatment of Tubercular Laryngitis—L. W. Dean, Iowa City.

Its history, the use of the actual cautery, of tuberculin, silence, sanatorium treatment and local treatment. Other measures necessary to assist with the use of the cautery in order to secure a good result. Conditions aiding in the prognosis.

15. Some Observations on Mastoiditis—F. E. Franchere, Sioux City.

Consideration of pathological findings in cases that have been operated upon and their relation to the symptomatology of the cases. Points in diagnosis, prognosis, technic, and after treatment.

16. Spontaneous Rupture of the Internal Carotid Artery Complicating Mastoiditis with Case Report—L. L. Henninger, Council Bluffs.

Of rare occurrence. One other case found in author's search of literature. Nothing distinctive about case in beginning. Necrosis and breaking down process necessarily proceeds, thinning of arterial walls, symptoms of pain, hemorrhage and possibly facial paralysis. Clot and holding back by surrounding tissues may avoid sudden fatal termination. Treatment; tying of carotid artery.

The Burlington Meeting.

Over against the eastern horizon there has arisen a new Convention City. Greater Burlington, generous, always hospitable consideration of the stranger within her gates to a degree that none leave her borders without becoming fast friends, is this year to entertain the sixty-first convention of the Iowa State Medical Society.

As regards the scientific work to be done and the entertainment to be afforded the visiting Aesculapeans, the State officials, sectional chairmen and the Des Moines County Medical Society present a solid phalanx of medical men imbued with the determination that the great medical body of our commonwealth shall record the 1912 meeting as the happiest, best and most profitable in the history of the medical association of the state.

The scientific program, as it assumes shape, promises papers of greater value than in any previous year. The oration on Surgery is to be delivered by Sam'l C. Plummer of Chicago. Professor George Dock of St. Louis will give the address on Medicine while Professor S. J. Kopetzky of New York will present a thesis before the Eye and Ear Section. Dr. Plummer's subject will be "Fractures of Long Bones"; Dr. Dock has chosen "The Movement for Exact Treatment"; and Dr. Kopetzky's address will be on "The Widening Boundary of Medicine in its Relation to Otology, Rhinology and Laryngology."

For quietness and acoustic properties the spacious assembly room of the Congregational church, where the general assembly convenes has been pronounced the finest that has been provided for a like meeting in many years. The Commercial Exchange rooms are likewise ideal for the sessions of the House of Delegates and for the Eye and Ear sessions. The meeting place of the general assembly is but two blocks from headquarters, while the Exchange rooms are almost directly across the street.

The local arrangement committee has plans well under way for an afternoon function and automobile trip for the Women Physicians of the State on Tuesday, May 7th to be followed by an evening banquet at the new Hotel Burlington, the pier of any hostelry in the state. On Wednes-

day afternoon, May 8th, a similar auto trip will be given for the wives and other ladies accompanying visiting physicians, while a party will be given on Thursday afternoon, May 9th. Following the President's address on the evening of the first day there will be a theatre party for all, at which several scientific films will be shown.

A river trip to Keokuk to inspect the Power Company dam was planned, but because the project would consume an entire day and evening, it was found necessary to abandon it. In its stead the committee has decreed that on the evening of the second day the entire State Association with ladies will be entertained on board one of the palatial excursion boats of the upper Mississippi River. A reception for the officers of the State Association will be held enroute, while one of Burlington's celebrated bands will enliven the hours on the waters with a mixed program of popular and classical selections.

Hotel accommodations, which for so many years ostracized Burlington as a Convention City, are now at once ample and attractive. Headquarters will be established at the new Burlington where accommodations are already reserved for the meeting. It has accommodations for three hundred and fifty guests with a reserve capacity of seventy-five, a total of four hundred and twenty five guests with rates from \$1.00 to \$3.00 per day.

The Hotel Delano has been rejuvenated, remodeled and refurnished and has accommodations for two hundred and fifty with rates \$1.00 up. The Union Hotel, with its refurnishings and in a new dress throughout, will care for two hundred and twenty guests on a fifty cent rate. Dunn's Hotel is equipped for fifty at from fifty cents to \$1.00 and the Grove for fifty at fifty cents to \$1.00. All are European, but have cafes in connection. These with several conveniently located restaurants will attend to the inner man. Several smaller hotels collectively, will accommodate fifty to one hundred more.

Main line train service in and out of Burlington is ideal for convention purposes and cross connections are exceptionally good in most instances. From the west the C. B. & Q. trains arrive at 9:06 and 10:45 a. m., 2:15, 3:22 and 10:00 p. m.; departing at 10:50 a. m., and 2:38, 10:00 and 11:17 p. m. From the north and northwest the C. R. I & P. trains arrive at 7:00 a. m., 1:40, 6:35 and 10:40 p. m.; departing 9:15 a. m., 3:30 and 9:15 p. m. The C. B. & Q. from the north and northwest arrives at 11:45 a. m., 2:50 and 9:05 p. m.; departing at 3:50 p. m. Trains from the south over the St. L. K. & N. W. arrive at 9:05 a. m., 3:22 and 8:55 p. m. and depart at 7:00 and 11:20 p. m. From the south and southwest over the C. B. & K. C. train arrives at 7:00 p. m. and departs at 7:45 a. m. The M. N. & S. from the north arrives at 11:05 a. m., and 3:20 p. m.; departing at 8:00 a. m. and 4:00 p. m.

Our visiting friends from Illinois will have occasion to arrive in Burlington from the north at 9:00 p. m.; from the south at 10:30 a. m.; and 12:25 p. m.; from the east at 5:15 and 10:45 a. m., and 2:33, 6:40 and 9:51 p. m., with convenient trains for returning home.

Only the principle trains are here taken into account, most of the late night and early morning arrival trains being omitted while the departing morning trains are in almost every instance likewise omitted. Daily river service affords those along the Iowa and Illinois border from the North and South opportunity to reach Burlington about 9:30 a. m.

Burlington is the oldest city in the State and has always played a prominent part in the history and in the politics and policy of the com-

monwealth of Iowa. It has always been a leader in health problems and the medical fraternity has never failed to send a large and able delegation to every state meeting, no matter how distant. It is a settled policy on the part of the rest of the state to show to the entertaining society its appreciation of this fact, and the attendance will eclipse all previous years.

The placid waters of the attractive Mississippi with its incoming and outgoing steamers and ever dotted with white canvas sails and with launches darting here and there over the glistening surface; the enchanting scenery of the splendid park at the southern extremity of the city with its broad drives, its shady nooks, expanding green swards, commodious forests of flowers, the maize, the lake, play grounds and the picnic rendezvous; the picturesque Country Club, country drives, etc., are sufficient attractions, without the special entertainment provided, to entice the wife of every physician and surgeon to accompany her husband to the 1912 meeting.

Burlington's Medical Organization is one of the oldest in the State, having been organized in 1873 and christened as the Medical Society of Des Moines County, Iowa. The Fraternity was called together take proper notice of the death of Dr. John F. Henry. Dr. Philip Harvey acted as chairman of the meeting and after attention was given to the specific purpose for which the meeting was called, Dr. W. W. Nassau made the initial motion which brought into existence the local Society which this year celebrates the 39th anniversary of its birth. Of the nineteen signing the Constitution but three are living. Dr. Geo. B. Little is still in practice in Burlington. He was chairman of the committee which drafted the Constitution and By-laws. Dr. Jas. J. Ramson resides in this city but is retired and has not been a member of the Society for about twenty years. Dr. J. V. Bean moved to Fairfield about twenty-five years ago and is still practicing.

Previous to the organization of the Des Moines County Medical Society Burlington had her "Medical Club" and a nameless organization or non-organization met spasmodically for many years antedating the formation of the Club. So that there was much pioneer work done in Burlington,—enough to create sufficient interest in and about this city and county in medical subjects to form the nucleus for a State Society.

Sixty-one years ago, June 19, 1850, the Iowa State Medical Society was formed at Burlington with Dr. E. Lowe of Burlington as its President, Dr. H. M. Mathews of Burlington recording secretary, Dr. J. F. Sanford of Keokuk corresponding secretary, and Dr. G. R. Henry of Burlington treasurer.

May 1st 1849 Dr. John F. Sanford, then of Davenport, attended the meeting of the American Medical Association in Boston and returned to Iowa enthused for the formation of a State and County Medical Societies. A few months later he moved to Keokuk and by correspondence and arduous travel by stage and horseback, succeeded in securing an attendance of twenty-five physicians and surgeons at Burlington for organization. Dr. John F. Dillon, now Judge Dillon of New York is the only living charter member of the Iowa State Medical Society.

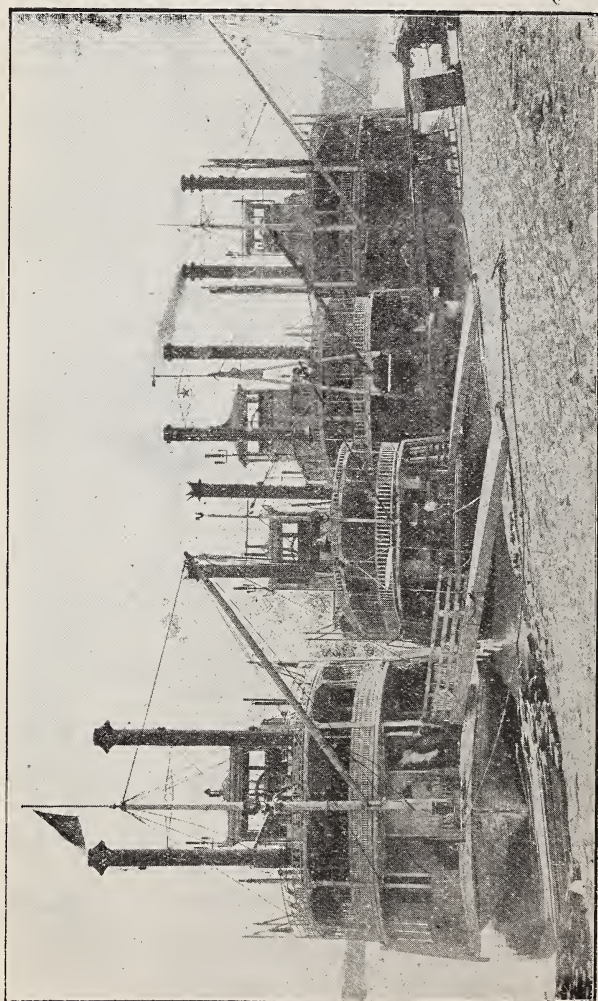
For a few years during the Civil War the annual meetings did not materialize but in 1864 a good representation assembled in Iowa City and in 1868 at the Des Moines Meeting it was decided to incorporate.

The State Society has almost multiplied her membership by ten, while the entertaining city together with many others has a membership greater than that shown by the State charter roll. It is not too much to

expect not less than one-fourth of the State membership to be in attendance on the 1912 Meeting and that a very great many will be accompanied by the ladies of their families.

The members of the local society are enthusiastic; first in the confident hope that the meeting will be memorable for the real work accomplished and secondly, they are determined that a general good time, felicity and fellowship will be intermingled throughout.

Dr. C. H. Magee, the president has a watchful eye over the general situation and has called to his aid the following committee on arrangements, viz: Chas. P. Frantz, A. J. Thornber, and J. N. Patterson. A. W. Sherman, vice-president and Bertha M. McDavitt, sec'y have the interest of the meeting at heart and are ever ready to assist Burlington sends her advance greeting and felicitation to the profession of the State and bids every member a genuine and royal welcome.



Typical Steamboat Scene at Burlington.



Congregational Church,
where General Sessions
are to be held.



DR. G. N. RYAN.
Ch'm. Board of Trustees.



The New Hotel Burlington, Headquarters.



Commercial Exchange, where the Eye and Ear Section and House of Delegates will meet.



Old Zion Church, where the first Meetings of the Iowa State Medical Society were held and the Society was organized and where the first Legislature of the State met.

DEATHS.

Dr. B. D. DeKalb: Benjamin Drew DeKalb, son of Samuel and Susanna DeKalb, was born in Loudoun county, Virginia, on the 17 day of July 1841. Died Wednesday, March 20, 1912, being 70 years, 8 months and 3 days old.

He studied medicine and graduated from Jefferson Medical College, Philadelphia, Pa., in the year 1865, going from there to Sharpsburg, Maryland, where he practiced with Dr. A. A. Biggs until 1868. Here he was married to Margaret A. Smith on the 18th day of January, 1866, who with four children, Harvey Dungleon, at home, Mrs. L. P. Van Werden, Leon, Iowa, Mrs. E. H. Sharp, Leon, Iowa, and Mrs. L. J. Landis, Grand River, Iowa, survive him.

In the fall of 1868 they came to Leon, Iowa, and lived in the house with Dr. and Mrs. Gardner until the following spring, when they moved to the farm, which has been their home for 43 years.

He followed his profession after coming here, riding miles and miles over the prairies and unbroken country, over rough roads and trails, frequently being called into adjoining counties and into Missouri, enduring the trials and hardships that came to the pioneer doctor. In 1880, on account of poor health he gave up active practice. From then on he engaged in managing his farm, in mercantile and banking, until 13 years ago, when he retired from all business. Nine years ago the disease that caused his illness developed, and while he has been a continuous sufferer, yet he bore it all patiently and was ready to go when the summons came.

He united with the M. E. church, at Sharpsburg, Md., when 25 years of age. After coming west, being so far distant he was denied church privileges, but never lost faith in his God.

Funeral services were conducted at the home Friday at 1 o'clock, by Rev. J. L. Boyd, of Glidden, Iowa, formerly pastor of the M. E. church in Leon.

Dr. DeKalb was a man of strong and admirable character. Quiet and retiring by nature he was nevertheless firm in his convictions, persistent in his purposes, steadfast, in his friendships and faithful to every trust.

Dr. Michael L. Shine, one of Buchanan County's most successful physicians, passed away at his home in Winthrop, on March 2d, in his fifty-sixth year.

The deceased was born of Irish parentage in the state of Kentucky. In his infancy, his parents removed to a farm near Independence, Iowa, where he grew to manhood, working on the farm and attending the country school.

Having been bereft of both of his parents early in life, he was obliged to rely upon his own exertions to get his start in his career.

When the ambition to study medicine came to him, he went to Tilford Academy at Vinton to prepare himself to enter a professional school. With nothing to depend upon but his robust constitution and the determination to succeed, he worked his way through the course and graduated in the class of 1882. He then entered the medical department of the State University at Iowa City; but for lack of funds did not complete his course at once.

In 1884 he married Mary Frances Williams, located in Winthrop, and began the practice of medicine.

After two years of professional experience, he resumed his study at Iowa City, and graduated in the regular school in the class of 1887. He

then returned to Winthrop to remain permanently, where he built up a large practice and won for himself an enviable social position. He took an active part in the affairs of the community, having served as mayor and as a member of the school board for several years.

His untimely death was caused by blood poisoning contracted while performing an operation upon one of his patients—the release coming at the end of a week's illness.

His genial nature and courageous spirit made him a natural physician and surgeon. He leaves to mourn his loss, his wife and four sons, and hosts of loyal friends whose love for him strengthened with the acquaintanceship of his twenty seven years of professional service.

His memory will long be cherished in the community as a noble example of one who died as a martyr to suffering humanity.—Dr. B. B. Sells, Sec. of Buchanan County Society.

Dr. D. A. LaForce, former mayor of Ottumwa, ex-representative from Wapello county, and a physician and surgeon of prominence, died Sunday afternoon at 5:30 o'clock, at the family residence, 427 West Fourth street. Dr. LaForce has been ill since August, 1910, when he had a slight hemorrhage of the brain, which resulted in partial paralysis. Since that time he has not been able to follow his profession, in which he took rare delight. Dr. LaForce was a native of Indiana, but had spent most of his life in Iowa. He was a member of the state legislature in 1884 and was mayor of Ottumwa from 1893 to 1897. In his profession he was one of the best informed men of the state and he was the beloved physician in many homes. He was actively engaged in the practice of medicine for over fifty years.

Dr. LaForce was of French Huguenot descent. The Duke de la Force was commander in chief of the Huguenot forces one of the French provinces in the struggles of the Huguenots in maintaining their Protestant faith. As a small boy this same duke escaped slaughter in the great massacre of St. Bartholomew by feigning death lying in the street with the dead body of another victim thrown over him. Later he became grand marshal of France.

After a course at the Iowa Wesleyan college he began to study medicine in 1857 at Ashland under the preceptorship of his brother, Dr. James W. LaForce and of Dr. Samuel M. Evans. He also attended lectures at the College of Physicians and Surgeons at Keokuk, Iowa. As was frequently the custom of the time, after completing the first course of medical lectures he began to practice medicine in the vicinity of Ashland. In the next year he located near Denver, to which place he had gone overland across the plains with his brother, taking a herd of cattle. Having thus acquired sufficient funds he took another course of lectures, graduating from the Keokuk college in the spring of 1863. He took a post graduate course in 1882 at the Chicago Medical college, now the medical department of Northwestern university.

After graduation he was appointed assistant surgeon in the United States hospital at Keokuk, where many thousands of sick and wounded soldiers were brought during the war. The next year he was commissioned assistant surgeon of the 56th U. S. C. troops in the field and early promoted to surgeon. He was soon detailed to the United States hospital at Helena, Ark., where he was second in command. On the death of his chief on the field of battle he was made surgeon in full charge from May 8, 1864, until the close of the war. During the last year he was again promoted to be medical director of the eastern department of Arkansas. Before

he was mustered out he was surgeon in charge of the quarantine station at St. Louis during the epidemic of cholera. Here he had charge of the treatment of over 700 cases of cholera, an experience of great interest and scientific value which is rarely given to a physician in this country.

In October, 1866, he married Miss Mehala Jane Dudley, daughter of Rev. Edward and Eliza Dudley at Mt. Pleasant, Iowa, where he practiced medicine three years and where his two oldest children, William B., and Burdette D., were born. Thence he moved to Burlington for a few years and then to Agency for thirteen years. At the later place he was a member of the school board for ten years, and of the city council for eight years.

He has been a sincere, active churchman since early manhood, joining the Methodist church and was for several decades a member of the official board of the church, and for several years was Sunday school superintendent.

In his professional life he showed marked ability. Besides the enviable reputation he gained as a surgeon in the army he had been eminently successful in gaining the esteem and admiration of his fellow practitioners and the love and confidence of his patrons.

He was a member and president of several medical societies.

In all of the varied circles of activity in which he was thus engaged he will be greatly missed, and it would be hard to say in which his loss will be felt the keenest. It is certain that very few have filled so well as he the duties and responsibilities of the beloved family physician.

Those of the immediate family who survive him are his wife and four sons, William B., Burdette D., Frank E., and Charles R., and one brother, Dr. James W. LaForce.

SOCIETY NEWS.

The Iowa and Illinois Central District Medical association, spring meeting, under the presidency of Dr. H. M. Decker was held at Hotel Harms, Rock Island, April 11. 7:30 p. m.

1. Clinical cases, 5 minutes each.
2. Inflammation of Knee Bursae, E. S. Bowman, Davenport. Abstract: Anatomy, physiology, prepatellar, infrapatellar, suprapatellar, acute and chronic inflammation, tuberculosis, palliative and radical treatment. Excision preferred, other treatment. Discussion: P. A. Bendixon, A. M. Beal.
3. The Destructive Larvae of two species of flies which attack diseased parts of the human body. Report of fatal case, L. A. Berry, Geneseo. Abstract: The common blue bottle, and flesh fly, in certain warm climates, attack diseased parts of the human body, and larvae therefrom are often very destructive. Larvae of former species, when affecting nasal passages with purulent discharges, may enter brain with fatal results. Discussion: H. M. Decker, J. E. Asay.
4. Osteoma and Exostosis, a Pathological and Clinical Study, D. B. Phemister, Chicago. Discussion: S. B. Hall, J. T. Haller.
5. Spasm of the Pylorus, D. S. Fairchild, Clinton. Abstract: Relation to the appendix, gall bladder, hyperacidity, symptoms, diagnosis, treatment. Discussion: Wm. Rendleman, Carl Matthey.
6. Voluntary Reports, 5 minutes each.
7. Buffet Lunch.

The session of the Missouri Valley Medical Society at Colfax was in some respects one of unusual interest in-so-far as the character of the papers were concerned. The program was long but contained some papers of unusual value. The symposium on the afternoon meeting of the second day was particularly interesting, and the papers and discussions were of unusual merit. Dr. Eisendrath's paper on "Malformations of the Kidney", Dr. Bremner's paper on "Tuberculosis of the Kidney", and Dr. Bransford Lewis' "Lantern Slide Illustrations of Cystoscopy, and of Vesical, Ureteral and Renal Surgical Conditions" were papers that would do credit to any medical meeting in the country, and all who had the privilege of listening to these papers felt well repaid for the time occupied in attending this meeting. Dr. Donald Macrae, Jr.'s paper on "Caesarean Section for Placenta Previa" and Dr. Walter L. Bierring's on "The Early and Late Diagnosis of Gastric Carcinoma" were of unusual value. The remainder of the program we did not have the pleasure of listening to, but we assume from the subjects and from the names of the authors, that they were of much interest.

It was unfortunate that a heavy snow storm interfered seriously with the movement of trains and the attendance was consequently rather small.

Every visitor was impressed with the advantages of holding the meeting at the Hotel Colfax, where everything was done to make the gentlemen present and their wives comfortable. The bringing together of the Society and the holding of the meetings in the hotel added much not only to the comfort of the members but to the expedition in working out the program without material loss of time. We are sure that the planning of medical meetings at the Hotel Colfax is something well worth considering in fixing upon the place of meeting.

The regular meeting of the Pottawattamie County society was held in the Library Building at one o'clock p. m., April 2nd, 1912 at Council Bluffs. The president being present took the chair. The secretary being present acted as secretary. The minutes of the previous meeting were read, and approved.

The application of John S. McAtee for membership which was presented at last meeting, and application of Dr. Earl Schaffer for re-instatement was referred to the Board of Censors. In absence of regular Board, the Chair appointed Drs. Henninger and Spaulding to act with Dr. Dean. The Board made favorable report.

Motion of Dr. Dean, seconded by Dr. Watterman. Rules be suspended and the Secretary instructed to cast the entire ballot of the Society for Dr. Schaffer. Motion of Dr. Treynor, seconded by Dr. Watterman. Rules be suspended and the secretary instructed to cast the entire ballot of the society for Dr. Jno. S. McAtee. Applications for membership were also received by Drs. Freda Clark and G. C. Giles, the same being referred to the Board of Censors.

The following program was rendered: Paper by Dr. F. W. Dean, "Gonorrheal Ophthalmia." The same being discussed by Drs. Carson, Tubbs, Spaulding and Cole. Paper by Dr. C. S. Erickson, "Acute Articular Rheumatism in Children." Discussed by Drs. Spaulding, Cole, Pierce, Macrae, Treynor, Dean and Tubbs.

After the program the society indulged in an interesting discussion on preventative medicines.

On motion of Dr. Treynor, seconded by Dr. Cole—it was decided that

the President and Secretary should arrange the place for the next regular meeting.

The following members were present: Drs. N. Jasper Jones, G. Augustine, D. H. Carson, R. B. Tubbs, V. L. Treynor, A. B. Hennessey, C. S. Erickson, A. A. Robertson, Jno. S. McAtee, L. L. Heninger, J. C. Waterman, G. A. Spaulding, J. H. Cole, J. M. Barstow, Donald Macrae, Rose Rice, H. P. Jennings, W. F. Pierce, Ada Michell, C. A. Hill. Motion of Dr. Treynor, seconded by Dr. Tubbs—Adjourned.

The Washington County Society met at the City Hall, Washington, Wednesday, April 17, 1912.

1. Follicular Tonsilitis—H. C. Hull, Washington. 2. Typhoid Fever—L. R. Hammer, Kalona. 3. Report of a Case—J. G. Henderson, West Chester. 4. Election of Officers. 5. Automobile Trip to the County Hospital, which is rapidly nearing completion. 6. Report of Progress of County Hospital by W. M. Bailey, Chairman of Board of Trustees.

Lucas County Medical Society held a meeting at the office of D. Q. Storie, Jr., of Chariton, on February 26th, 1912. The following officers were elected: I. S. Buzzard, of Chariton, president; J. B. Robb, of Russell, vice-president; A. L. Yocum, Jr., of Chariton, secretary and treasurer; T. M. Throckmorton of Chariton as Delegate to the State Convention and G. F. Niblock, of Derby as Alternate Delegate. A. L. Yocum, Sr., T. P. Stanton and D. Q. Storie, all of Chariton, as members of the Board of Censors for 3, 2, and 1 years respectively. This society elected that they meet each month hereafter. The next meeting will be held on Monday, Mar. 25th.

The Polk County Society met Tuesday, March 26, 1912 at 8:30 p. m. at the Savery Hotel.

Program: "The need of sanitary inspection of schools, and medical inspection of school children." by E. E. Dorr, M. D.; "Tonsillar and adenoid effections of school children; their dangers and proper correction," by F. E. V. Shore, M. D.; "The Binet test for mental deficiency and the need of ungraded classes for our public schools," by F. A. Ely, M. D.

The Wapello County Society program for April 16: Laceration of Perineum—Dr. F. W. Newell; Obstetrics, Then and Now—Dr. A. O. Williams.

May 7: The Optic and Ocular Nerves—Dr. D. E. Graham. Typhoid Fever—Dr. A. H. Peterson. The meetings are held at the office of Dr. Williams. ,

The Jefferson County Society met Friday evening, Mar. 29, at 6:30 p. m. at the Leggett House.

Program: The Therapeutic Value of Open Air, Dr. J. V. Bean, Fairfield, Iowa. Treatment of Tuberculosis with Carl Spengler's Immune Blood, Dr. Charles Ryan, Des Moines, Iowa.

Dr. McDavitt, the secretary sends out a very optimistic and encouraging letter to the physicians of Des Moines county. Full attention is called to the importance of society work and the real need for proper organization. The Des Moines County Society is making great plans to entertain the State Society in May.

Humboldt County Society elected for 1912, president, Dr. E. L. Watson, of Bode, vice-president, Dr. J. J. Bowes of Livermore, secretary-treasurer, Dr. R. C. VanVorhiis, of Humboldt, delegate, Dr. E. O. Vollum, of Bode censor, Dr. E. E. Malin, of Livermore.

The last meeting of the Des Moines County Society was held at the Hotel Burlington, at eight o'clock, April tenth. The following was the program:

Appendicitis—Symptoms and Diagnosis, Dr. G. A. Chilgren, City; Border-line Cases, Dr. Chauncey Sherrick, Monmouth. Treatment, Dr. F. M. Tombaugh, City; Drainage, Dr. F. B. Dorsey, Keokuk; Discussion, Dr Carl Wahrer, Ft. Madison.

Dr. Paul E. Gardner of Chickasaw county writes that every physician in the county is a member in good standing in the county and state societies. We are awaiting more reports of this character. A little perseverance on the part of the secretary will get the desired results.

Bulletins.

We are in receipt of Vol. I, No. 1 of the Bulletin of the Appanoose County Medical Society. It is quite a pretentious affair, having sixteen pages of reading matter and ten pages of local advertising. It is issued monthly from Centerville. It contains the program for the meeting following date of issue, a paper on Broncho-Pneumonia by Dr. Tillmont, a letter from the President, Dr. J. L. Sawyer, a page of medical and surgical don'ts, and several notes and paragraphs of local and general interest. The publication committee is Dr. C. S. James, J. L. Sawyer and C. P. Tillmont. It is a most commendable undertaking. As far as we are informed, there are but two county society bulletins in Iowa—Dubuque and Appanoose

Dr. J. B. Donaldson, Secy. of the Washington County (Pa.) society writes that of thirty-four bulletins started in Pennsylvania, all, with one exception, continue.

There are several county societies in Iowa which could publish bulletins with great profit. We suggest that every society having over twenty-five members consider this matter. Get in communication with Dr. Langworthy of Dubuque and Dr. James of Centerville.

We have received copies of a series of letters sent out to all physicians in Appanoose County. They are written by Pres. Dr. J. L. Sawyer and Secy. Dr. C. S. James. Attention is called to the points of the program the importance of county and state organizations, suggestions are asked for the betterment of the society, clinical reports and exhibits are requested. The nucleus of a library has been obtained, a regular meeting place is to be provided, apparatus will be provided for exhibiting specimens, slides, charts, etc.

A bulletin has been started, altogether, this society promises to be one of the most active in the state. With dues at \$6.00 per year, the society has a neat surplus and is enabled to do invaluable work. When every county in the state realizes that some advance must be made to get all the physicians, and provides suitable apparatus, has exhibits and makes the program interesting, instructive and progressive, the membership will take care of itself. Makes your meetings worth while.

D. S. FAIRCHILD, M. D......**Clinton**
 EDITOR
C. A. BOICE, M. D......**Washington**
 ASSOCIATE EDITOR

No. 11

*Read before Iowa State Medical Society, 1911. Section on Eye, Ear, Nose and Throat.

Quite early in my career, I examined a patient with a mature, senile cataract in one eye, who absolutely denied any light perception, and operation was not advised. The patient was later operated on by another surgeon, and obtained very excellent vision. Since then I have examined two other cases, one denying any light perception, and another who had very faulty light projection; both were operated with excellent results, and no changes were visible in the eye ground after operation. In two other instances, patients gave every evidence of healthy eye ground, but after operation were found to have quite extensive choroidal changes, which seriously interfered with vision.

More accurate knowledge may be obtained as to the probable condition of the interior of the eye, by a careful study of the pupillary reflex, by the use of a small beam of light which can be directed through the pupillary space in different directions and on different areas of the retina. The trans-illuminator, devised by Veasey, is admirable for this purpose, and by its use we are enabled to obtain a very small beam of intense light. It is probable that when this beam of light falls on the opaque lens, some diffusion of the light rays takes place, but from a practical stand point, not enough to seriously interfere with the test. In the two cases mentioned before, as having none or very imperfect light projection, the use of a fine beam of light through the pupillary space gave very prompt and decided pupillary reaction in all portions of the eye ground, and it did not seem possible that there could be any gross lesions, and future ophthalmoscopic examination proved the correctness of this opinion. In another instance, light projection was normal in all directions and the pupillary reflex was normal, except when the light was directed onto the temporal periphery, when only a very slight pupillary contraction resulted. In this case there was a large area of choroidal atrophy in the temporal field, which probably had some relation to the formation of the monocular cataract. In this case there were some vitreous opacities, and vision only amounted to 20-100 with his correction on.

By using this method of testing the pupillary reflex, combined with the examination of the light field our conclusions will generally be fairly accurate. In testing the light field, by placing a lighted candle at four meters distance, for the patient to fix his eye on, and then using a miniature electric light as the object for testing the light field, we will obtain more accurate results than can be obtained by the longer flame of the candle.

As to whether the lens is mature or "ripe", it seems to me of little importance, if both eyes are affected and the patient has lost the ability to read, and is in danger of becoming totally blind, we are justified in extracting the lens nearest maturity. It is unquestion-

ably safer to extract the lens at maturity, and if the patient has one good eye, we are justified in postponing operation to a more favorable time.

In one hundred and twenty-eight extractions, only sixty-nine were cataracts that could be termed mature. The results in the immature cases have been just as good as in the mature cases. In considering the advisability of operating an immature cataract, we should search for evidence of inflammatory condition of the ciliary process, and if there is any undue injection of the ciliary vessels, or if there is a tendency for the eye to flush on the least manipulation, the operation should be postponed. These cases are very prone to develop a disastrous post operative irido-cyclitis.

In the immature cases, a large corneal section should be made, and if any considerable cortical substance remains, we can resort to irrigations of the anterior chamber and if a moderate amount remain, it is not a serious handicap to the future outcome of the case.

The physical examination is of the utmost importance, and should not consist of a few questions regarding the patient's general health, and a cursory examination of the urine, but the services of a competent internist should be enlisted, and the physical examination accorded the same careful detail that is employed in examining the eye.

The surgeon is especially interested in the condition of the cardio-vascular system as to the existence of arterio-sclerosis with its attendant high blood pressure. It is probable that moderate arterial hyper-tension does not materially lessen the success of a cataract operation, but any excessive tension must certainly favor inter-ocular hemorrhages, and these patients are also very apt to have gross inter-ocular changes that render the prognosis less favorable.

Since the beginning the practice of having a careful examination of the cardio-vascular system made in cataract cases. I have had fifty-two under observation, five of which had hyper-tension exceeding 190 m. m. those with a blood pressure below this point being disregarded.

Two of these cases were considered unfavorable cases for operation, on account of excessive hyper-tension, gross kidney lesions, and evidence of extensive inter-ocular changes.

The three remaining cases were placed in the hospital, under treatment, until the hyper-tension had been reduced to what was considered a safe point for operation. It has not been possible to reduce the blood pressure to anywhere near normal in the cases under my own observation, and I have not considered it necessary. If we succeed in improving the patient's general condition, and reduce a hyper-tension of 220 m. m. or more, to 200m. m., the patient is in a much more favorable condition for the operation. If the blood pres-

sure was not influenced by treatment, other conditions being favorable, I should not consider the hyper-tension sufficient cause for not operating, but I would consider the prognosis less favorable. In my own experience, the visual results have not been as good in cases with high arterial tension, on account of choroidal changes which were evident after the operation, although they have acquired good, useful vision.

These patients with high arterial tension, should be treated by thorough depletion, by the administration of five grains each of calomel and jalap, as recommended by Babcock. One brisk purge of this kind at the beginning of the treatment, which should commence at least two weeks before the time set for operation, will have a wonderful influence on the future treatment. In one of my cases the administration of the vaso-dilators for over a month, had no influence in an arterial hyper-tension of 220 m. m., until calomel and jalap were administered and followed by vaso-dilators, which now had a very favorable influence on the high arterial tension. Of the vaso-dilators, the nitrite of sodium, in one grain doses, three to five times a day, seems to act more favorably than any of the other preparations. The exhibition of the iodide of sodium or potassium, seems to have a beneficial influence, especially when used in conjunction with the vaso-dilators. The treatment should be continued until the healing process is complete and at the time of the operation, the patient should not be subjected to any strain that can possibly be avoided. It is better to operate on the patient in the bed in which he is to remain, rather than run the risk of moving from the operating room following the extraction. If there is any bronchial or other respiratory trouble, likely to cause coughing, appropriate sedatives should be administered several days before, and during the first few days after the operation.

Urinalysis gives us important information, especially when we have to deal with a diabetes which is not necessarily a contra-indication to operation, but its presence does not enhance the chances for a successful outcome. My experience has been limited to one case who had 5.2 per cent sugar, which was reduced to 1 per cent by the administration of codein, sodium bicarbonate and properly regulated diet. The operation was entirely successful, the healing process being prompt, and the patient has good vision now, six years after operation.

In addition to the usual examination of the urine for sugar, albumen and casts, it seems a wise precaution to search for indican, and other evidences of auto-intoxication. In one instance of a very severe irido-cyclitis, following cataract extraction, the urine was found to contain a large per centage of indican, and improvement of the condition was coincident with treatment directed toward the

alimentary canal, I am reasonably confident that auto-intoxication plays a very important role in the causation of non operative irido cyclitis, and it is only reasonable to suppose that its existence predisposes to inflammatory lesions following operation.

The respiratory system should receive attention, chiefly for the purpose of discovering any condition which might cause coughing the first three or four days during convalescence. Some of the most troublesome coughs occur in patients with high arterial tension, and are greatly improved by the treatment directed toward the relief of that condition.

In cases of chronic bronchitis the cough can be controlled by the administration of teaspoonful doses, every three hours, of a mixture suggested to me by Dr. James Alderson, containing, codein sulphat three grains; sodium bromid one dram; spirits nitrous ether four drams, and syrup of tolu enough to make three ounces.

The mental condition of cataract patients, especially those with advanced senility, is worthy of consideration, and may enable us to prevent a dangerous post-operative insanity. In subjects who are in advanced senility, who have been totally blind for a considerable period with signs of declining mentality, should not be removed to the strange surroundings of a hospital, away from accustomed relatives and friends. In one case, a man seventy-five years old, violent insanity appeared within eight hours after operation. Treatment availed nothing, and irreparable damage was done before his relatives reached him, when he immediately improved, and was in his normal state of mind within twelve hours after their arrival. Six months later, the second eye was successfully operated in his own home, and the patient retained his normal state during convalescence. In another instance of post operative insanity, the patient became sane as soon as he was placed under the care of his relatives.

The preparation of the immediate field of operation, should include a thorough examination of the upper respiratory tract, and especially the nasal cavities, and especial attention should be directed toward the nasal accessory sinuses. The existence of an old suppurative process in one or more of the accessory sinuses is, in my opinion an absolute contra-indication to any operation involving the opening of the eye ball.

The sinus disease should be eradicated so far as possible, by thorough surgical treatment, and then a period of six months allowed to elapse, and if there is no recurrence of the suppurative process in the sinuses during that time, the cataract operation may be undertaken with fair chances of success, but even then the prognosis should be guarded, as the chances for infection are still good.

One patient, sixty-three years of age, with hyper-mature cataracts, had old suppurative processes involving the ethmoids and

frontal sinus with a well marked atrophic rhinitis. The sinuses were opened and drained through the nasal route, and subjected to three weeks treatment by irrigation of the sinuses and nasal cavities, twice daily, and frequent spraying of the nasal cavities with 1-2000 potassium permanganate solution. At the end of three weeks, the nose was apparently quite free from any discharge, and the left lens was extracted in its capsule. At the first dressing, twenty-four hours after the operation, the cornea was very hazy, and the margins of the corneal wound sloughing. The eye was totally destroyed in a few days by meningococcus infection. Six months later this patient passed into the hands of another surgeon, who took the precaution of having a radical operation performed on the frontal and ethmoid cells, and then closed both lachrymal ducts. The right lens was extracted six weeks after the completion of the treatment of the nasal trouble, and after repeated cultures from the conjunctival sacs had been negative, and this eye was lost by the same infection that destroyed the first.

In the future should I be unfortunate enough to encounter another cataract case complicated by chronic suppuration in the nasal accessory sinuses, I shall insist on radical surgical treatment of the infected area, and if at the end of six months, the nasal trouble has shown no signs of return, I shall consider the case fairly safe for operation.

I shall not encroach upon your time by discussing the preparation of the immediate field of operation, as there is wide range in the methods to be employed, all of them accomplishing the same result.

Personally, I like to have the patient about the hospital a few days before the operation, so that he may become acquainted with his immediate surroundings. During this interval patients are instructed to take daily baths, and wash the head and face at frequent intervals with warm water and castile soap. The field of operation is generally prepared in the morning of the day preceeding the one set for the operation, and again night before, and the operation performed as early as convenient the following morning. I was formerly in the habit of having the eye brows shaved, and the lashes cut, but more recently this is a useless procedure. In one individual an entropion occurred, and the short, stubby lashes came in contact with the cornea, and produced considerable irritation.

In my first fifty cases, with few exceptions, the simple extraction, without iridectomy, was performed, but on account of three disastrous prolapses of the iris occurring in the last twelve, I adopted the combined method and with few exceptions, has been the operation of choice in my later experiences. Quite recently it has occurred to me that, while I have had no trouble with iris prolapses in my later cases, four eyes have been lost from infection, in cases

who have had the combined extraction, while no infection occurred in any of the simple extractions.

It is probable that the iridectomy predisposes to infection, although in two of my cases there was good ground for believing that the infection would have occurred in a simple extraction.

My experience with the extraction of the lens in its capsule, according to the Indian method, has been limited to two cases with sclerosed lenses and thickened capsule. In both cases the results were excellent, but I do not believe those of us who are doing a limited number of operations are justified in adopting the method as a routine.

Discussion.

Dr. R. M. Lapsley, Keokuk: This is a paper on a subject that is of a great deal of interest, because it seems after all our great chance for success. We all know that it requires a high degree of skill to get a possible success in these cases. Much of the success depends upon the management of the case at the time and following the operation. In my early experience I operated a number of cases with unusual success, then only seeing the case the one time and then the operations performed under unusual circumstances, and the patient got along as well as cases I have had under better control. At the present time I like operating only where I can have the case in the hospital and there are only a few reasons that lead me to do otherwise now.

In regard to the after treatment of these cases, I have made considerable change from what I started in with, such as making the patient lie on their back for two or three days following operation, as most of my cases were old and feeble people, who generally went to pieces quickly, and it seemed to me there was more danger of a bad result. I had a patient get up following an operation at 8 o'clock in the morning and sit up part of the day, and everything went nicely. Now I allow my patients to sit up a little while each day and I find they stand the confinement very well. I suppose most of you have made a change from the usual darkened room and substitute a dark mask instead. All the serious trouble I have had was with a nervous patient (which by the way are our hard cases) whom I had not prepared to control the head at the critical moment, and the serious loss of vitreous was the result. In spite of that I got a fairly good result. Another was a case of a wealthy patient, and one that we all would like to get the best result. He became unmanageable at the critical moment. These are the only cases I recollect at the present time.

Dr. Frantz, Burlington: I would like to cite, that of a mother of a doctor. She was suffering with conjunctivitis and iritis in one eye, and cataract in the other. I was fearful of the case and the probable result, but the son kept insisting. I finally gave my consent to do it and I do not know that I ever got a better result. In that case the vision was 20-40. In a case where the patient apparently has not a very long time to live it is better to take a chance than to wait.

Dr. Murphy: I wish to report a case of a patient about 55 years of age suffering with cataract. The test of his light perception was not good, but as far as I can remember he was able to get around. Each eye the cataract seemed to be ripe. I operated on one eye. He complained of rhinitis, but very little. I operated the cataract and everything got along perfectly. In about three weeks the sight was gone. Later on when the other eye was ready for operation, he came to me, but I was not anxious to operate it, and felt that he was not anxious to have me do it, so he went to Dr. Gifford of Omaha. He told him that he should be under treatment for a time before he would operate.

PARINAUD'S CONJUNCTIVITIS, WITH REPORT OF TWO CASES.

ROBT. M. LAPSLEY, M. D., Keokuk, Iowa.

Parinaud described the form of conjunctivitis which bears his name, in 1889, and up to the present, a comparatively few cases have been reported, so we might yet regard it as a rare disease.

The main characteristics of the disease are: a rapid development of severe conjunctivitis, with thickening of lids, and soon large granulations, sometimes polypoid. These granulations are much larger than the ones commonly found in trachoma, and sometimes project past the edge of the lids.

The thickening extends to the bulbar conjunctiva, which may be chemotic, but the cornea is seldom affected.

There is, in the early course of the trouble a muco-purulent discharge.

About the time of the development of the eye trouble the lymphatics, pre-auricular, sub-maxillary, and superficial glands of neck on same side become markedly swollen, and sometimes go on to suppuration, although that is not usually the case.

The disease is limited to one eye, in all the cases reported, except one.

The conjunctival thickening is very irregular, and ulcerated spots occur on the lids, in part of the cases.

In the cases reported, with corneal involvement it has differed from the corneal troubles in diseases like trachoma, where pannus and ulcer occur, and purulent conjunctivitis where we have ulceration.

The cause is not understood, Parinaud, and perhaps most other observers, attribute it to animal origin, but none are able to explain in what way.

It has the appearance and symptoms of a severe infection, and it seems rather curious that only one eye is involved.

So far all attempts at finding a specific micro-organism, in either the tissue or discharge, that could be regarded as a cause of the trouble, have been failures.

While the inflammation and thickening give the appearance of a very severe trouble, and the progress is likely to be slow, the prognosis is very good as to the final outcome.

It may last from two to six months, or longer, but the tendency to ultimate recovery is good.

The treatment has varied with the different observers, and, none that is in any way a specific treatment, is known.

The principal methods of treatment have been:—the use of ni-

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trate of silver, in varying strengths, sulphate of copper, bichloride of mercury, and surgically, the excision of the polypoid or pedunculated tumors, and squeezing the lids, similar to the operation done for trachoma.

Case 1—Mrs. H. S.—aged 52, wife of a farmer, living in a small town, health not good, came to me March 5, 1909 with marked swelling, and discharge, and also pain, worse at night.

The eye was very red, and had a very marked and firm chemosis, lids thickened, and with marked granulations, cornea hazy, pupils small, and marked enlargement of the pre-auricular, and cervical lymphatics, which had come on about the same time as the inflamed eye.

Owing to the fact that there was some disturbance of cornea and iris it does not follow the description of Parinaud's conjunctivitis, in most of the cases. I used atropin, and found the iris sluggish, but got it well dilated, and kept it so most of the time. The pain lessened, but the hazy condition of cornea remained several months.

The chemosis was the most persistent I have ever seen, and gradually improved, with the lids. The granulations on the lids were well marked, but not so large as to become pedunculated.

The lymphatic enlargement was very pronounced

As to origin, if animal, it may have been from association with a cow she milked. At first I thought it a specific trouble, and gave her mercury internally. The local treatment was atropin, and the use of argyrol, 25 per cent, with an occasional application of 2 per cent., silver. The case gradually improved, until July 26, and that was the last visit she made, at that time, and the trouble was not entirely gone.

She re-appeared Oct. 24, 1910, and said, in the meantime she had been able to see well enough to thread a needle, but sight had again failed.

At this time the lids were smooth and normal, and the lymphatics were not enlarged, showing a complete recovery of conjunctivitis, but the cornea had become very cloudy as in marked interstitial keratitis, but later there was some ulceration, and the cornea did not clear well.

Case No. 2, Lucille H., age 4, was brought to me Sept. 15, 1910, with right eye inflamed for about two weeks, and no history as to cause, marked thickening of lower lid, with several granulations, and the upper lid not so markedly thickened. There was also slight chemosis, but the cornea was clear, and pupil reaction good.

The pre-auricular and cervical glands were very markedly enlarged.

In the two weeks following, the upper lid grew a good deal

worse, and the eye could not be opened much. There was some discharge, but not profuse.

Both the eye and the lymphatics grew worse, for a time, and I clipped off some of the larger polypoid granulations, that extended past lid border. Some ulcerations occurred, and I used 2 per cent silver on them, and to less extent on the granulations. Mostly she was treated with, argyrol 10 per cent and 25 per cent, and also used atropin occasionally.

This case has run a tedious course, and, possibly, partly because of not having it under close enough inspection, and treatment.

The glands became very greatly swollen, and I lanced one on Dec. 22, and one March 18, 1911, letting out quite a large amount of pus. The lids grew much better. The last of March, she had the measles, and the eye was more inflamed, and the glands that had been opened suppurated freely. Following that the lids improved, and the larger granulations grew smaller, and she became able to open the eye nearly as wide as the other. Unfortunately this case has not quite recovered, so the total length of the course of the disease can not be given. As a curious coincidence, a chalazion came on the lower lid of the other eye, and I, at first, feared a case of double Parinaud's.

The first case I reported is unusual, on account of corneal disturbance, but the trouble with the lids and lymphatics, was typical in appearance of Parinaud's conjunctivitis, and since she had a reappearance of corneal trouble after she was entirely well of the conjunctivitis, I thought it was a coincidence, and was not dependant on the same cause. When she came with corneal trouble the second time, the lids were as smooth, as if no trouble had existed.

The second case seemed typical, and was probably more severe than usual, since the glands suppurated, and the course was so long. However I did not have either of these cases under ideal control or treatment.

I could not get any suggestion of cause, and animal origin was doubtful. Case 1 milked one cow. Case 2 was such a small girl, I could get no suggestive history of association with animals, although everyone, is, at sometime brought in contact with animals, there was no intimate relation in this case.

DISCUSSION

Dr. Amos, Des Moines: When Parinaud first reported his cases, I made up my mind to pursue this subject very closely and keep in mind the particular manifestations of this disease. I watched pretty carefully for some time for some test when these cases first came to me, but on treatment for awhile every one of these cases turned out to be trachoma. So fruitless was my search for this disease that I lost interest in the matter and forgot all about it until I was asked to open the discussion of Dr. Lapsley's paper.

I must admit that I have not seen any one case that was Parinaud's. I had a case a week ago that I believe was one of this trouble, but I saw it only a couple of times and expect some one else is treating the case as trachoma. I am very sorry I cannot aid Dr. Lapsley by the report of a case.

SURGICAL DISEASES OF THE COLON.*

ALANSON M. POND, M. D., Dubuque, Iowa.

It was not the writer's primary intention to discuss the entire scope of surgical diseases of the colon, but the changes in the colon which are directly due to an interrupted intestinal current are so varied and so far reaching that it seemed impossible to classify them under a less comprehensive heading.

Let it be understood, however, at the outset, that this paper has to deal with the causes of intestinal stasis, arising from conditions in the colon and the immediate and remote results of such interference, with an attempt to clear up some points of diagnostic confusion.

Like other divisions of the gastro-intestinal tract, the colon is largest at its commencement or cecum than at any other portion of its course. The average adult cecum measures three and one half inches in diameter and its capacity at six months of age is one pint, at two years, two and one half pints, and in adults nine pints. When the contents are weighed we find the cecum has a capacity at six months of one pound, at two years of two and a half pounds, and at maturity nine pounds.

The colon is usually palpable throughout its entire course, the hepatic and splenic flexures possibly excepted in deep abdomens or thick abdominal walls.

The tube of intestine is held suspended from the cecum to the hepatic flexure by attachments underneath the liver, and the ascending colon is attached rather loosely to the abdominal wall. The transverse colon is held as in a hammock composed of the gastro-hepatic omentum and the meso-colon; this portion is capable of wide excursions of motion usually downward and may sometimes be found as low as the pubes. Obviously the erect position and the varying states of bodily nutrition determines the degrees of this mobility.

The descending colon hangs from the abdominal attachment at the splenic flexure, and is only very loosely attached to the abdominal wall.

In a classical paper on the subject of "Chronic Constipation" (Feb. 1908 Surgery, Gynecology & Obstetrics) Mr. Lane of London describes the colon as the cesspool of the digestive system.

Any interference with the complete drainage of this tract must be followed by serious physical results.

The contents of the small intestines which are emptied into the colon have been treated to the different digestive ferments and so long as the current passage of this material is not interrupted or impaired the substances are discharged from the body as effete

*Read before Iowa State Medical Society, 1911. Section on Surgery.

material. Should the current become stagnated from any cause the intestinal contents undergo fermentation and readily decompose, and the fluid portion of the stool is absorbed and we first have a dilatation which usually occurs at the cecum and distends to enormous proportions crowding out of the pelvis the small intestines and sometimes encroaching upon the sigmoid.

The mucosa of the colon suffers from two distinct sources; first, the distention puts it on the stretch, and impairs the nutrition, and second, the fermentation of the contents causes a hyperemia and sometimes, if not relieved, an ulceration.

The transverse colon descends into the abdominal cavity forming a loop between the hepatic flexure and the splenic flexure, and where the transverse colon lies in contact with the ascending colon on the right side, and the descending colon on the left side, adhesions are formed which prevent the normal position of this viscus and seriously interferes with the adequate drainage of the colon.

These bands of tissue which at times surround the colon and prevent the free passage of the intestinal currents are not adhesions as we understand that term, they are not alone, hyperplasias; they are really a membrane supplied with blood vessels and Lane holds that they are the developmental resources of a crippled colon.

These bands produce kinks in the intestine which lessen the lumen of the canal and permits of stagnation of the intestinal currents, which in turn produces a profound toxemia, and a train of symptoms which may be perplexing and confusing.

The following case may be taken as typical:

Patient a young woman twenty three years of age. Father died at forty-three of pneumonia. Mother living at fifty-one in good health.

As a child had whooping cough and measles; menstruated at thirteen, regular and painless. Was strong and robust until twenty years of age. Had an acute attack of pain in right side which was diagnosed by attending physician as appendicitis. Complained of periodic headaches and loss of weight. In October, 1909, had another acute attack of pain in right side which was very severe. She was taken to Mercy Hospital in Dubuque, and a very able surgeon removed the appendix and right ovary. She made an uneventful recovery and regained her strength.

In July, 1910, I saw this patient suffering with severe abdominal pain, more pronounced on the right side. Abdomen was distended with gas and was tender. Stomach dilated capacity one hundred eight ounces, and hydrochloric acid greatly increased; the right kidney was very movable and the right tenth rib was unattached to costal arch.

The young woman was very nervous and emotional, laughing and crying easily.

The course of the colon was tender throughout, especially at the cecum, and the hepatic flexure. She gave a history of obstinate constipation at times, which was relieved by cathartics; would be followed by a diarrhea accompanied by severe pain. Repeated examination of the urine showed an excess of chlorides and the presence of indican and occasionally albumen.

Stool showed mucus, blood cells and at times pus. The acute attacks of abdominal pain were not accompanied by a rise in temperature or any rigidity of the rectus muscle.

Here was a case giving a clinical history of chronic appendicitis which was not benefitted in the slightest degree by an operation; for the simple reason that the operation did not correct the cause of her discomfort.

In January, 1911, the abdomen was opened for impaired function of the colon. The cecum was dilated and the site of the appendix was smooth and non-adherent; the tube and ovary of right side were gone and there were no adhesions to the surrounding viscera.

Beginning a short distance above the dilated cecum and extending very nearly to the hepatic flexure was a thin, translucent membrane which entirely invested the colon. This membrane was not of the character of adhesions commonly seen uniting viscera and was attached to the right parietal wall and passing in a thin veil like structure to beneath the liver. The membrane resembled edematous tissue somewhat, and one would not have been surprised to see fluid escape on incision. It was movable upon the anterior surface of the colon and was supplied with a circulation which showed bright red capillaries through the almost transparent structure. A grooved director was inserted between the membrane and the peritoneum of the colon, and the membrane incised throughout its entire length after which it was readily wiped away from the intestine by gauze; the insertion was ligated and cut off. At the upper portion of the right abdomen the ascending colon lay in contact with a loop of the transverse colon, and after the removal of this membrane some adventitious adhesions were separated between the two arms of the colon which relieved a sharp angulation at the hepatic flexure; this surface oozed from the injured peritoneal vessels but very promptly ceased on application of a hot compress.

The colon was then freed and resumed its normal position, the abdomen closed. Recovery was uneventful from operation and no return of abdominal discomfort to date and we do not expect any further trouble.

Dr. J. N. Jackson read a very instructive and interesting paper under the title of "Pericolitis" before the Western Surgical Association in Minneapolis, in 1908, and described just such a membrane as I have outlined above which he named "the pericolic membrane."

Arbuthnot Lane of London called attention to the same condition in 1908 in the article above mentioned.

Dr. C. H. Mayo described this, and similar conditions, in December, 1910, before the Western Surgical Association, at Chicago.

Since March, 1908, I have seen seventeen cases of undisputed pericolic membrane demonstrated at operation and removed. Five of these cases were in men, and twelve in women. In seven of the cases there had been a previous operation for abdominal pain, without benefit; three men and four women. Of the men, two had lost their appendices, and the third had had a gall-bladder operation made in which the gall-bladder was drained. Of the four women two of them had each lost their appendix and right ovary, and two had their appendices removed.

The man on whom the gall-bladder operation above mentioned was made, was a railway mail clerk, aged thirty-eight, and had suffered severe pain for several years. The pain was in the right epigastrium and was accompanied by vomiting. After the gall-bladder was drained he was free from discomfort until about four months after he had resumed work. The first attack after his operation produced profound melancholia; he had thought himself free of his only handicap in life and became very despondent, talked of suicide and such morbid acts. It required considerable persuasion and argument to gain consent for a second operation.

In August, 1908, I opened the abdomen above the umbilicus in the middle line and there found the same character of membrane arising on the under surface of the liver and investing the transverse colon and forming a thin fan-like connection between the gall-bladder and the pylorus. This was tied in sections and was readily wiped away from the pylorus, gall-bladder, and colon. The gastric symptoms were easily accounted for and for nearly three years he has remained perfectly well and gained materially in weight.

These cases which have been operated upon without benefit, demand a very careful analysis and with that end in view we shall attempt to outline the usual symptoms in the order with which they occur.

Pain. For a time after the operation there is a complete absence of any discomforting symptoms. This is obviously explained by the prone position, which permits the distorted colon to assume its normal relations; the energetic evacuations of the bowels has emptied the stagnated current and the gaseous distention and sagging are avoided and relieved; the restricted diet following the operation is more completely digested and there remains less material to be ejected. The rest in bed is probably of the greatest benefit for it relieves the tortuous colon and permits an easy evacuation.

As soon as the erect position is assumed the colon again sags and

when the patient recovers sufficiently to resume his usual duties, he is distressed to note a return of the unwelcome pain. This pain is explained away usually by the surgeon that it is due to adhesions which will be absorbed after a short time.

This comforting assurance is not fulfilled and the patient again suffers as severely as before the search for help.

There is no doubt a very large factor of neurasthenia in these cases, and it is hard to draw the line between the pain of mind and the pain of body. Pain of body, however, does exist to a most distressing degree, and is periodic in occurrence and severity. There will be intervals of complete comfort, and there is a wide variance in the severity of pain, ranging from a discomfort to severe lancinating attacks.

The recti muscles are not rigid as in a peritoneal hyperemia but a very distinct spasm of protection can be elicited by percussion.

The entire course of the colon may be tender from distention and easily made out; some times the cecum can be distinctly felt in the right fossa as a rounded elastic mass which can be identified by percussion as tympanitic. The pain may be in the center of the abdomen, above or below the umbilicus, and is evidence of an impaired transverse colon. When the pain occurs above the umbilicus the colon has not sagged greatly, and when it is found below, it is because the transverse colon has descended into the pelvis, and is distended, and distal stenosis is caused by the newly formed band.

In six of my cases there had been severe, left-sided pain at intervals and the descending colon was exceedingly tender during these attacks.

Gas. It is more than likely that much of the pain is caused by gaseous distention. The gas is the result of the fermenting or decomposing intestinal contents which have been delayed in their current or even stagnated and the presence of this gaseous distention is determined by the encircling bands which compromise the lumen of the colon.

As stated above the cecum is the commonest site and by reason of this location the process is confused with catarrhal or non-suppurative appendicitis.

Gas elsewhere can be traced to a restriction of the lumen of the canal and this restriction may be of temporary character only.

Mucus. It is observed that in a short time following these acute attacks of pain that mucus is present in the stool. The character may range from a gelatinous mass slightly yellow in color and perhaps tinged with blood to a complete cast which may be cylindrical or marginal in character. Blood and sometimes pus is present in the stool and probably proceeds from an ulcerated area which exists as

a result of stagnated decomposing feces or the area of impaired circulation caused by the enormous distention.

Auto-Intoxication. Probably the most serious phase of this impaired intestinal activity is the wide range of symptoms which follow the profound auto-intoxication.

Mr. Lane classifies these manifestations as follows: (Surg. Gynec. & Obst. Nov., 1910.) "Lost fat which permits the mobilization of such organs as the uterus, kidneys and liver and permits prolapse of the intestine sometimes to the extent of forming a vicious circle.

Circulatory changes which permit the hands and feet to become cold and dark in color.

Respiration is impaired and may become entirely diaphragmatic.

The skin becomes lark colored especially about eye lids and in the axilla, over the abdomen and on the inner surfaces of the thighs. Muscle pain and weakness especially in the back which may be treated for rheumatism without benefit."

Periodic headaches assuming the type of migraine, beginning at a dull pain in the morning and increasing in severity during the day, perhaps accompanied by vomiting and called "sick-headache". Constipation may be so severe that the patients are taxed to their wits end to secure bowel movement. The entire list of cathartics are usually tried and each for a time will secure a sufficient evacuation but usually soon lose their efficiency until the bowels may go unemptied for days, and the wonder is not so much that there is evidence of auto-intoxication, but that they suffer no more serious results. The constipation is the result of the impaired colon, bands limit its lumen and the retained feces poison the patient and abolish or diminish peristalsis.

These cases are always toxic and present such a varied clinical picture that they are condemned as neurasthenics and receive very little careful consideration at the hands of their physician, who is greatly relieved when the discouraged patient seeks benefit at the hands of another.

Neurasthenia does exist and is one of the most constant, important symptoms of the intestinal intoxication. The nervous system suffers first from the intoxication, then follows the muscle pains in the back, and legs, headache, enteroptosis and later the loss of fat, pigmentation of the skin and then we find mucus in the stools, and hear the story of acute abdominal pain.

The fact that neurasthenia plays such a conspicuous role in this condition is very likely to cheat the patient of the benefit of a careful physical examination or a serious clinical consideration.

Doctors do not like neurasthenic patients, and they are prone to ascribe all the aches and pains complained of by such patients to

the mind or the imagination, irrespective of physical findings, because after a snap opinion of neurasthenia a physical examination is seldom made and when undertaken, is too often biased by prejudice.

The treatment proper begins with the diagnosis, for no beneficial treatment can be intelligently undertaken at least until a substantial suspicion is entertained.

Until pain in the abdomen means something besides appendicitis and a diseased ovary the impaired colon will continue its process of making miserable people seek their physician only to be told that they are neurasthenic.

The symptom picture is not complex nor is the condition rare or uncommon. It simply requires an honest estimate of symptom value.

Pain in the abdomen occurring at intervals and varying in severity, which is not attended by rigid muscles and which is followed in a short time by the discharge of mucus speaks for an impaired colon.

The pain in the back and legs, the excruciating periodical headaches are toxic in character, and the loss of body fat, the cold extremities due to the impaired circulation, the shallow breathing, pigmentation of the skin, and grave neuroses are due to the auto-intoxication resulting from absorption of stagnated decomposing intestinal contents.

This chain of symptoms should lead one to at least suspect a restricted colon, and when occurring after an operation made for abdominal pain can almost certainly be ascribed to intestinal stasis. In the cases of the transparent bands enveloping the colon at one or more points the treatment consists in freeing the colon by dividing the bands and wiping them from the surface of the intestine, then tying the points of insertion and removal.

This simply restores the colon to its normal functions, and care must be exercised to renew the tone of the bowel by sufficient rest, easily assimilated food, and if necessary proper abdominal support. If this post-operative precaution is not appreciated and applied the same forces which produce the bands in the first place will reproduce them.

In the longer standing cases, however, these bands consist of tough fibrous tissue and will not be easily removed; in such cases it may become necessary to resort to the operation described by Lane, viz:—to remove the entire colon, dividing the ileum four or five inches from the cecum and make an anastomosis with the rectum.

Success in these cases depends on early recognition. In the cases giving a history extending over considerable time, the small intestine has suffered structural damage by continual distention of gas which has impaired the mucosa and thinned the muscular wall. The

stomach is usually dilated and is associated with a descending kidney. The abdominal ptosis, gastropptosis, enteropptosis, and other relaxed conditions of the viscera may wholly be due to intoxication from stagnated feces.

No class of patients are more deserving of our sympathy and painstaking examination than these unfortunate nervous people, and there is no field in the entire science of surgery more pregnant with opportunity for brilliant achievement than is offered by these cases of impaired function of the colon.

Discussion.

B. C. Everall, M. D., Waterloo, Iowa: It seems like folly to attempt to discuss a paper that has been given such careful study. The only thing we can do is to emphasize the fact that diagnosis is nearly the whole thing. Autotoxemia occurs in all these cases, but I do not think it is the cause of death in very many cases, except in producing nephritis or other secondaries, the secondaries being the cause of death. The patient's ability to adapt themselves to toxemic conditions is especially well illustrated in the case of congenital megalocolon (Hirschsprung's Disease) in which we rarely see any toxemia. These patients go from five to thirty days without a bowel movement, and scarcely ever give signs of toxemia; also every doctor has patients who go from 7 to 8 days without a bowel movement, giving scarcely any symptoms from the condition. These, however, are the exceptions. I think the key to the situation is found in the fact that the appendix is often attacked for diseases which have their origin elsewhere, especially the colon. The appendix being removed and the colon being left to suffer. The protoscope would do much to clear up this source of error.

Dr. Pond: I have very little further to add, except that if a man has a patient with pain in his abdomen, and he finds no serious involvement of the appendix, he feels that he must do something, and that he must take out the appendix, anyway, whether it is seriously involved or not. He does not seek the colon; it does not enter his head. He doesn't find whether it is movable or not; he simply reaches up and cuts off the appendix. On the other hand, a very distinguished member of this society is at the present time defending a lawsuit because he didn't take out the appendix. So that the temptation is great, when we get the abdomen open and don't find the pathology that we expected, to take out either the appendix or the right ovary. I don't know why it is that women must lose their ovaries even with a slight development of cyst, but the ovary must be taken out. If I succeed in calling the attention of this body of men to the fact that there may be conditions in the colon which will give an enormous amount of pain, and that when they have the abdomen open and don't find the pathology that they expected, a look at the colon may clear up the entire situation, I shall be satisfied.

SOME OBSERVATIONS ON MASTOIDITIS AND ALLIED AFFECTIONS.*

L. L. HENNINGER, M. D., Council Bluffs, Iowa.

By way of apology wish to state that it is not intended in this paper to make an exhaustive summary of cases or to enter into a scientific discussion of any particular phase of aural surgery

The unusual prevalence of mastoid affections during the past

*Read before Botna Valley Medical Society, 1911.

spring and winter has led me to consider presenting briefly a few thoughts to the society on the subjects, points to which my attention has been especially drawn incidental to treating some of these cases and which I think will be opportune to mention here. Much has been written concerning the various diseases and conditions leading to the affection and therefore that phase has small part in this paper.

The intimate relation existing between the pharynx, middle ear and the mastoid cells is too thoroughly understood to necessitate my giving a lengthy dissertation on the anatomical relations between these parts further than to remind you of the high location of the aditus ad antrum—the only port of entry from the middle ear to the mastoid cells—and the comparative difficulty of germs reaching the antrum in an early stage unless under considerable pressure from within the tympanic cavity.

Politzer holds that the presence of acute mastoiditis is more dependent upon the anatomical structure of the mastoid rather than upon the form of the bacterial infection, in other words, that the cellular or pneumatic form of mastoid such as one sees in a certain per cent of cases has a predisposition to the growth of bacteria, and of these mastoid affections coming to operation the pneumatic variety of mastoid shows a very high percentage relatively.

On the other hand, the course of the disease is dependent more on the form of bacteria present and to simplify the classifications the germs are spoken of under two general varieties, capsulated and non-capsulated. Of these the non-capsulated germ produces the most acute and violent symptoms—sudden pain and progressive fever, etc., and is perhaps, better known to the profession from its pronounced clinical features and frequent occurrence than the capsulated and therefore I wish to speak briefly of the latter in the hope that it will clear up a few puzzling features which from time to time come up in the clinical picture of mastoid and middle ear inflammations.

Graham says the streptococcus mucosus is a typical germ of the capsulated variety. Accompanying a middle ear inflammation due to this germ the drum membrane presents a moist, pale, dull reddish color, reminding one of a secretory catarrh. The familiar points of the drum outline are to be seen but the sharpness of outline is obscure and light reflex not well marked. There may be no earache and but little tenderness to pressure over the mastoid and that only in small areas. A paracentesis gives a mucous or muco-purulent exudate. The disease keeps the picture until the advancing destruction of bone has produced a complication that is dangerous to the life of the patient or has made itself manifest externally. The symptoms are as a rule so mild that the patient often comes first to the physician with a well marked peri sinus or extra dural abscess or even a

meningitis (as I have seen) and then the history is brought out that the dull indefinite aching ear and partial deafness has been in evidence for several days or weeks or even months and patient did not consider himself sick enough to consult a physician.

To illustrate I will report briefly a case which came under my observation the past winter. J. M., age 52, was sent to our office February 7th, 1911. Patient had been having some pain in his right ear for over two weeks but had been up and about during all the time and did not consider himself ill enough to this point to take any special steps for relief. He felt as though he had the "grippe", not much appetite, etc., and was also worried because the condition did not clear up. There had been a discharge from the ear for 4 or 5 days but the last day or two was slight. The opening in the drum membrane was small and the secretion was of a muco-purulent nature with a preponderance of the mucous element. There was an indefinite pain in the ear and post-aural region but even on deep pressure the pain was not well marked over the antrum, tip, or post tip of mastoid but some tenderness was elicited at the point of exit of the emissary vein. Temperature 99 1-2 in office but said he had had more fever the day before; pulse slightly accelerated. The drum was incised for a freer elimination of pus and patient was given some aspirin and instructed to report next day. February 8th he felt no better and he was sent to the Jennie Edmondson Hospital and an ice bag applied to the region of mastoid. Temperature varied during the night, rose to 102 but was back to 99 3-4 in a. m., with slight indefinite pain in side of head. Operation was advised and acceded to. The usual field for a mastoid exenteration was prepared and on removing the bony cortex which was very thick we found the mastoid filled with pus which was lying on the thin bony shell protecting the sigmoid sinus a small area of which had been exposed by the destructive process. Considerable granulations and discolored bone in the area caused us to further examine the sinus wall by carefully removing the bony plate upward for a short distance in the direction of the knee and downward toward the jugular bulb. The sinus wall was discolored and somewhat thickened and resisting to the touch but as no fistulous opening could be discovered it was decided not to proceed further unless subsequent symptoms should demand it. This was about 2 p. m. In spite of the fact that the pus had all been evacuated from the mastoid cells the condition did not improve and at 9 a. m. the temperature rose to 104 and we decided at once that it came from the sinus. At 11 o'clock that evening we again put the patient on the table, dissected down to the internal jugular vein and tied it off. The sinus proved to be full of pus and clots extending past the knee above. This was all opened and curetted out, the whole packed with iodoform gauze and wound dressed

as before. This interference was followed by a subsidence of the temperature and the condition steadily improved for over two weeks when there was another slight rise in temperature which was improved after more clots and pus were removed from the lateral sinus which was opened till near the torcula. Further improvement was cut short by the development a few days later of a pneumonia in his weakened condition he was unable to throw off and he died three days after the onset of the lung complication. While I was unable to get a laboratory report on the particular exciting germ in the case, I feel justified in view of the extensive involvement without more alarming symptoms in assuming that it was a capsulated germ and probably a streptococcus mucosa. I have cited this case to show how desperate an involvement one may have with comparatively slight symptoms. Earlier interference here would have cut short the process and saved the necessity for so extensive a dissection to get at the source of trouble.

Another case, Mr. V., age 48, a tailor, presented himself at our office March 15th with a pain in the ear, slight fever and some tenderness on pressure in the region of the antrum with history of several days duration. Discharge of a more or less stringy muco-purulent secretion was slight,—drum bulging. A prompt paracentesis followed by increased flow of pus, with boric acid irrigations and ice bag to post aural region apparently stopped the process, fever and tenderness disappearing and in a few days patient went back to work and did not report at the office again till July 1st he again called and said his ear had been hurting him for several weeks but ear had not been discharging. The whole post auricular region was much swollen and edematous while the ear itself was displaced outward and forward very markedly. Temperature 101. On the table there proved to be an almost complete destruction of the posterior bony wall of the external auditory meatus and part of upper plate of the mastoid cortex with pus pressing up from the mastoid cavity, the cells being almost completely broken down by the destructive process. The nether structures, the sinus and the sinus wall were intact. Thorough evacuation of the pus and curettement of the diseased bone at once arrested the process and recovery has been uneventful.

In this case the thinness of the posterior bony wall and mastoid cortex prevented the involvement of the deeper structures by permitting an escape of pus externally. The slow development of the process can be explained by assuming that the exciting germ was of the capsulated variety according to the previously cited authorities.

Early paracentesis is a first aid to a threatened mastoiditis. Hot fomentations, anodynes, etc., to relieve the pain, serve to mask the symptoms. When the drum membrane is inflamed and bulging

following the grippe, cold, or any other acute systemic affection give the patient a show by early and free incising of the drum. Mastoiditis may come on in spite of this preventive measure but it will lessen the percentage of such involvement very materially by so doing and incidentally save the patient many hours and perhaps days of acute suffering from pain before the membrana tympani ruptures spontaneously. Should mastoiditis supervene in spite of free drainage, ice locally has a decided inhibitory effect and should be applied in all cases. Heat acts as an incubator for the germs in the pent up cells and should not be employed except in the form of irrigations and this only in the presence of profuse discharge. A persistent pain or tenderness on pressure over the tip, post tip, or region of the emergence of the mastoid emissary vein, following a purulent otitis media and regardless of the amount of temperature calls for surgical interference. All diseased bone should be thoroughly removed and surfaces curetted smooth as on this depends the promptness of the healing as well as the ultimate result.

The prognosis in acute mastoiditis is good if treated along the lines suggested. The percentage of recoveries for such cases at Dr. Knapp's Eye and Ear Hospital, New York, during the year 1908-1909 was about 95 per cent. Where complications have already set in the result is materially changed according to the nature of the involvement. Ruttin of Vienna says if one case in one thousand of secondary meningitis recovers it is about all one can reasonably expect. Another prominent authority gives the mortality rate of sinus thrombosis as 85 per cent. My observation of results obtained in the New York Eye and Ear Infirmary and Dr. Knapp's Hospital during a period of over two and one-half years convinces me that this mortality rate is rather high.

In thirty-three cases we have operated between January and August, 1911, twenty-six cases have been acute uncomplicated mastoiditis, three cases acute mastoiditis with epidural abscess, two cases complicated by meningitis, two cases of sinus thrombosis one of which was further complicated by a cerebellar abscess. In the twenty-six acute cases the mortality was nil. The three cases with the epidural abscess recovered while the meningitis and sinus cases died,—one of the latter after being apparently on the road to recovery and over three weeks following the original operation was complicated by pneumonia as reported earlier in the paper.

While in Vienna I was privileged through the courtesy of Dr. Ruttin and Dr. Alexander to observe several cases of labyrinthine suppuration coming to operation. The subject of nystagmus and labyrinthine surgery has been largely worked out by Barany, Ruttin, Neumann, and Alexander. The direction and character of the nystagmus indicates the position and stage of the lesion. The operative

procedure consists in first performing the radical mastoid operation then burrowing into the petrous portion of the temporal bone with a fine chisel going back of the facial nerve, opening the posterior semi-circular canals, then with the same instrument decapping the promontory by one stroke of the chisel, thus establishing a communication and drainage from behind. The after treatment and dressings are much the same as for the simpler mastoid operations.

In all cases, the after treatment of surgical cases is of decided importance. The open treatment seems to do well in some cases while the blood clot in cases adapted for it and where the field has been specially prepared gives surprising results in rapid healing. Where packing is employed it requires no little experience to know just how firmly to pack in the gauze to insure firm and healthy conditions. Ordinarily, dressing applied every two days is frequent enough, though, in some cases the amount of discharge and odor, especially in summer, will demand more frequent attention.

THE MEDICAL PROFESSION AND THE PUBLIC.

FREDERICK P. LIERLE, M. D., Marshalltown.

“We and each of us have the power to become more efficient as physicians, better and stronger as men.”

It has seemed to me that there should be a better understanding of the medical profession by the general public. I have reached this conclusion because of certain conditions that exist in the public mind relative to the treatment, cause and cure of disease. The conditions to which I refer are conditions of distrust, superstition and a lack of belief in scientific medicine.

The cause of these conditions lies both with the medical profession and with the public. Our admitted inability to cope with various diseases to which the human body is heir, our incapacity to fathom the mysteries of life and death do not satisfy the public as to our fitness as physicians. Neither does trickery, graft and incompetence as practiced by a fair percentage of medical men who subsist upon the mental wanderings for help and hope of the incurable, tend to restore that confidence which is so necessary to, and so deserved by that great body of medical men whose watchword is prevention, whose love for humanity is genuine and by whom every effort is being used to relieve human suffering. The public's part in the cause of these conditions comes from an excusable ignorance of things medical. The vastness of the field of medicine, the marvel of the human mechanism, precludes the possibility of a comprehension of this subject without deep study and thought.

Ignorance of any subject or profession brands it with distrust and superstition. Superstition has played its part with the public in the cause and cure of disease from the beginning of time and is with us today. To some, our transgressions of nature's laws, resulting in disease is simply a visitation of the wrath of God; while with others a buckeye carried in the pocket, a piece of bacon planted under the eaves of a house and many other notions, quite as silly, dispel disease and brings the sufferer back to health. Apparent cures in these cases are based on beliefs that are unfounded, wrong deductions and drawn from faulty observations. Reason is the governor of truths. Truths are facts. Science is based on proven facts.

The building of a house or the planting of a tree must be conducted along the lines that reason and experience have proved to be right. Why then should not the treatment of disease be based upon reason and science? The plan of the physician is not to heal, nature heals; but it is our province and privilege to assist nature by increasing her resistance and helping her to combat disease and protect her by preventive measures thru our knowledge of its cause. There can be no denial of the fact that to the average individual life is his greatest asset; and yet he knows so little of how to preserve it. If he gets sick, he risks his judgment as to cause, cure, etc., instead of consulting someone whose training and study based upon reason and science will give him greater chances for recovery.

That Mother Goose's soothing syrup cured a case of black diphtheria or that a certain horse doctor in the community knows more about medicine than any physician, is not founded on reason and proves nothing. A single case or two has too many uncertainties connected with it to be of any value in arriving at a conclusion as to the value of any form of treatment. Statistical information covering hundreds of similar cases is the only evidence that proves or disproves the merits of any treatment.

Church and lodge affiliations, social distinctions, avoirdupois, or a pleasing personality does not make a doctor, notwithstanding the fact that the selection of a family physician is more often dependent upon one or more of these factors than by consideration of his medical ability.

The selection of the family physician should be accomplished only after the most thorough investigation into his professional attainments. His graduation from a reputable college of medicine may indicate a good start, but a good start does not always win the race. He who would finish in the front ranks must keep everlastingly at it or be distanced.

Modern medicine is a science; new truths, new methods are being advanced every day. The time is past when the half-baked make-believe gentry of the profession can make good. Their career

will be meteoric. The modern physician must deliver the goods.

The regular medical profession believes in the honest, scientific treatment of disease. We accept and use any treatment which has proven by test to be the best. Various periodicals, organizations and individuals have attempted to belittle the medical fraternity on the charge of medical trusts. Trusts or combinations have for their motive pecuniary gain by obtaining control of some commodity of which supply and demand are only relative.

No where in any medical organization is there any requirement in the matter of fees. The fee question is one which varies in every community. Custom, skill, weather, roads—all affect the valuation of service rendered.

Fee bills are simply a compilation of ordinary charges for ordinary cases under ordinary conditions and are only a convenience and are not binding. Every physician does work that is never paid for. The poor are always with us. It is his privilege to charge for his services what custom and the conditions of a given case would be considered just and reasonable. Doctors have to live. They have the same expenses to keep up about their homes as any one else. They have horses or automobiles to buy, books, instruments, office rent, and help, donations and post-graduate work, which they should take and which you compel them to take, that he may know the latest and best ideas in the profession.

Many people fail to consider that a professional man obtains his professional education at a sacrifice of much money and time; that it entails an actual expenditure of from \$4000 to \$10,000 and four to seven of the best years of his life. This time which would be reasonably worth \$1000 a year added to money actually spent means an investment of from \$10,000 to \$15,000. The doctor is entitled to an income from this money invested just the same as the merchant expects a reasonable income from a \$10,000 to \$15,000 stock of goods.

After that both the physician and the merchant should be compensated for their own services in the business, such compensation to be fixed by the quality and quantity of work performed.

Medical organization has for its purpose the advancement of medical science which embodies the prevention and cause of disease. This is done thru social intercourse and the interchanging of thought on the medical problems of the day. Membership in a reputable medical society should and usually is a recommendation to the public of his fitness as a physician.

Medical ethics always has been and always will be the star of hope for the medical profession; and with its setting the medical profession will become a chaotic mass of subterfuge and piracy on the sea of human suffering. Medical ethics has for its purpose the honorable administration by the doctor of his duties to the sick and af-

flicted. For this reason no ethical practitioner of medicine can countenance the methods of some whose advertisements and professional deportment bears the earmarks of deception and fraud. What could be more contemptible, what can be lower in the scale of human degradation than that doctor, who for a few paltry dollars will promise to cure or will stimulate hope in the incurable sick, and just such things are going on every day. Our current literature is filled with flaring advertisements, proclaiming wonderful cures, that are aimed at the desperate sick.

The traveling doctor advertises his great superiority. Did you ever look these fellows' records up? Do you believe that they care most about your health or your pocketbook? Did you ever hear of a Senn, a Murphy or Ochsner using such methods?

Do you praise your family physician when he cares for you for years like you praise the traveling quack who relieves you of a pain temporarily and your pocketbook eternally? These are some of the reasons why the medical profession does not believe in advertising. It places the medical profession and the treatment of disease on a commercial basis. Professional ability and justice to the sick are are subordinated to the cold blooded methods of commercialism.

Imagine for a moment the physicians of any community in an advertising campaign for business and then draw your conclusions.

The medical profession has its quacks—newspapers their yellow journalism and business has its dishonest merchants. The medical profession as a whole should not be condemned for the irregularities that exist. Every creed has its backsliders; every good cause its apostates.

The history of every great movement which has advanced mankind is incomplete without the biography of the weak, the treacherous and the sordid. The medical profession has had its Arnolds. But they are incidents. It has had and has now its magnificence of personal sacrifice, of lives risked and lost as bravely as upon any battlefield in experiment and time spent piecemeal in years of ill-paid labor. But these too are incidental. When all has been counted and said and done, there is but one test of the right of men, profession and movements to live and that is accomplishment. The medical profession must be thus judged and may well abide the judgment.

Success in the practice of medicine is not measured by the accumulation of wealth. The man who has kept abreast of the times and has been faithful to his trust in the relief of human suffering has succeeded.

The Johnson County Society met in Oakdale May 1. After an inspection of the grounds and equipment of the sanatorium, a symposium on tuberculosis was listened to. Refreshments closed an enjoyable and profitable evening.

CONVERSATISM IN ENUCLEATIONS.*

CHAS. P. FRANTZ, M. D., Burlington, Iowa.

In the rehearsal of some of his experience, the author does not wish to be understood that there is any conclusion within his own mind that he is any more capable than the average oculist in the management of major injuries to the eye ball. On the other hand the real object of this paper is that it may stimulate a thorough discussion and that we may all profit by one another's experience and together throw more light upon the management of severe contusions and incised or puncture wounds of the globe. Therefore, if the recital of certain cases with the essential portion of their histories as I will give them shall inaugurate a profitable discussion of the subject in hand—then may I venture to hope that others, with myself, shall reap some benefit from my efforts.

One's conclusions must of necessity be largely dependent upon the experiences of other oculists as recited to him; upon those cases which he has opportunity to follow in the literature of our Medical Press; and most important, upon his own experiences.

From my deductions I am forced to raise the query, "is there a greater number of enucleations than is necessary, and is an oculist justified in immediate or early removal of those traumatically blind eyes in which there is some question of their quieting down permanently?" The corollary to this query would naturally be, "is one justified in enucleating these eyes as long as the outcome is doubtful, either from the standpoint of the safety of the patient or from the standpoint of the safety of the oculist himself?"

Have we assimilated too many goblins from between the lines of our text books? Has the teaching in our Medical Schools of a decade or two ago regarding sympathetic conditions of the uninjured eye consigned us to the bed of nightly insomnolence, until we arise some morning with the grim determination to remove the injured member? Does this spector unwarrantably rush us along until we have honestly come to believe it a necessary procedure both for the safety of the patient and the oculist as well?

In my practice as an oculist extending over a period of nine years I have done but five enucleations; four of these were for glaucoma. The only eye which I have enucleated following traumatism was the direct result of repeated and recent injuries.

This patient, J. Z., gave a history of having had three injuries to the eye covering a period of less than a year. The first of these injuries resulted from running against a twig of a tree; the second was the result of an abrasion made by the patient's finger nail,

*Read before Iowa State Medical Society, 1911. Section on Eye, Ear, Nose and Throat.

while the third was similar to the first injury and resulted in a puncture wound in the cornea followed by infection of the orbital contents.

The patient was referred from a neighboring town and I had not seen the case until after the last injury, nor for some days after it occurred. It was very apparent that there was no hope of saving the organ. The other cases in which I believe I am warranted in stating that the question of enucleation entered are as follows:

F. K., age 85, February 25, 1910. Struck in left eye by chip of wood five days before being referred. Family doctor believed from amount of contusion, congestion, tenderness and pain that eye would need to be removed and so advised. On this 5th day after the accident the eye was markedly congested, conjunctiva greatly swollen, lachrymation, eye discharging slightly, very tender, tension raised, lens opaque, and pressed forward against the iris and cornea, obliterating entirely the anterior chamber which was not re-established. Eye continued exceedingly painful and an acute glaucomatous condition developed. After a week of palliative treatment an iridectomy was done and at the same time as much as possible of the lens substance removed. The eye continued to be irritable for some days, but pain gradually subsided, and eye has been free from pain and other untoward symptoms for the 15 months since the accident. Although almost blind in the other eye—this patient and his family refuse to permit discission at his advanced age.

A. V., age 30, December 13, 1909. Nail puncture through cornea, iris and capsule; loss of aqueous and some vitreous; prolapse of iris. Rust and dirt in wound; pain and gastric disturbance during the following days, temperature varied up to 102 1-2 degrees. Symptoms were slow to leave and patient complained of pain in other eye though no objective symptoms of sympathetic trouble were present. Patient was seen for the last time on January 22, 1910 and has had no further symptoms in this eye.

J. McL., age 56, May 28, 1909. Right eye struck by rebounding staple. Family doctor made diagnosis of "inflamed eye" and gave an eye wash, telling patient he would have no trouble with the eye and he could go right back to work. Driven by pain; patient five days later was seen at my office. It was found that a puncture wound had been made through the sclero-corneal junction and iris, with extrusion of vitreous and partial opacity of lens. There was no fundus reflex and vision equaled fingers at one foot in good light. Because of puncture wound into vitreous chamber together with excessive pain, severe headache, stomach disturbance, etc., enucleation entered into the realm of possibilities. Patient reports having had no symptoms whatever in this eye after having been discharged a year and eight months ago.

T. H., age 25, September 18, 1905. Incised wound through sclera about five millimeters in length with escaping vitreous and cloudy media. As the piece of steel which had pierced the eye ball had been pulled out of the wound there was every probability that no foreign body was retained in the vitreous. Pain continued severe with nausea and vomiting, and intense headache, temperature raised to 103 degrees.

Finally there was real or fancied pain in the other eye with a slight reddening of the conjunctival vessels which I later concluded was due to the patient's rubbing his eye. Symptoms pointed to marked disturbance within the eye ball and seemed to indicate sympathetic trouble and another candidate for enucleation presented itself for careful consideration. Atropine, antispetics, rest, hot applications, the salicylates and attention to the general condition, finally eliminated the apparent necessity of enucleation. Two months later after having been at work for a few weeks, severe pain developed in same eye and he returned to the Hospital for a few weeks. This is the last of any trouble with the eye in the past five years.

G. E. V., age 21, February 4, 1910. Left eye struck by piece of chisel. Patient could not tell whether or not piece fell from eye, but claimed piece struck him with very great force. I did not see this patient for forty-eight hours after accident as eye was attended by a general practitioner. At this time examination showed a very badly congested eye with evidence of an apparent small cut having been made into or through the sclera. The conjunctiva was closed over when I saw him; there was ciliary injection and vitreous very hazy; showing evidence of internal hemorrhage; tension normal, average amount of pain, vision equaled 3-200.

The question would naturally arise as to whether there was a foreign body within the eye. I determined to watch developments for from twenty-four to forty-eight hours. During this time it began to clear up externally and there was therefore no skiagraph taken. After a few more days it became evident that clearing had begun in the vitreous and it was deemed safe to give the eye a "watchful expectancy" line of treatment. Pain disappeared entirely. The eye continued clearing externally, but vitreous was still fairly hazy.

As he lived in another city he was turned back to his family doctor on account of the greater convenience in seeing him. Although I learned that his father wanted him to see another oculist I was not apprised of the time of his leaving the city and I had not seen him for a period of ten days previous to his seeking other counsel. The oculist to whom he went thought there was sufficient warrant in using the giant magnet and succeeded in removing a small piece of steel.

After a lapse of a few weeks, according to the report brought

to me by the patient he was urged to submit to enucleation. This was not permitted and the young man returned to my care. I found that an incision had been made through the cornea and an iridectomy performed. There was some pain and tenderness, and congestion of the ball, tension about minus two; vision proved to be nil. Patient could not distinguish day light from darkness. He was attended until all pain, tenderness and congestion disappeared and returned to work. At the present time his eye is entirely quiet and he reports it as having been so since I last saw him on April 23, 1910.

G. A. Z., age 30, September 17, 1902. Very small foreign body about 1-2 to 3-4 millimeters in greatest diameter cut through cornea and imbedded itself in lens. Patient became sick from the physical and mental effects and was not able to come to office for some hours.

Cut in cornea was found and foreign body was faintly visible in the opaque lens. Pain was intense, with headache and nausea. The eye was very greatly inflamed and ball exceedingly tender. Pain, tenderness, redness and headache continued with very great severity for a few weeks, while pain over top of head on the side of the injured eye was frequently manifest. The slight amount of extruding lens substance quickly absorbed and the foreign body became more plainly visible within the lens.

This patient has had, unfortunately, several injuries to this same eye during the past eight years. These occurrences have always been accompanied by an unusual amount of disturbance and pain, and on one occasion the patient had to be brought to the hospital in an ambulance so ill was he, and so severe was the pain from the blow of a flying bolt. There was with him the usual, unusual amount of disturbance, including nausea and pain over top of head together with irritation of the good eye.

I was advised to remove injured eye by doctors who saw him while at the hospital, but today this eye though blind remains a fairly undisturbing member. There are times, when patient is run down in health, this eye becomes slightly irritable.

J. M. S., Age 70, April 24, 1908. Patient came because of severe pain for some days in left eye. History which I was able to verify proved this eye to have been blind and to have carried a small piece of brass within its confines for a period of 33 years. He stated that he had been pleaded with at the time of the initial accident to permit the removal of the eye and was told that he would be blind in both eyes within a month's time if he did not submit. He refused enucleation and the physician then in charge probed for the foreign body, but if located, did not remove it. Several times afterwards, when from blows received on the eye or from exposure in his occupation, it inflamed badly.

He was again and again counseled to have it removed. Aside from these several attacks which were from one to ten days duration, the eye remained practically normal except as regards sight for a period of over 32 years.

For a few months before the patient came to me in regard to his eye he became greatly run down, owing to a cystitis and disease of the prostate gland which affected him, and acute glaucoma developed in the blind eye. After treating him with partial success, a recurrence was so severe that we mutually agreed that the eye were better out and it was accordingly enucleated. This patient died from his prostatic condition a year later.

J. N., age 55, August 21, 1909. Cornea and lens cut made by hot scale. Cataract formation and adhesion of iris to cornea; eye showing great irritation; conjunctiva swollen, lachrymation, photophobia, swelling of lids, pain and tenderness. Symptoms in general increased for some days, adding very severe headache, rather severe pains over top of head developed about the same time each night, namely 2:00 a. m. They continued for a week or more and congestion developed in the uninjured eye. Gradually all symptoms subsided and there has been no abnormal manifestation during the past year and one half.

A. G., age 21, July 12, 1904. A piece of steel drill which had broken, imbedded itself almost entirely in the right eye ball tearing through cornea, sclera, iris, lens, etc., and apparently piercing the posterior tunics.

This piece of drill measured one and 3-16 inches in length and 5-16 inch at its widest portion. Less than 1-8 of an inch remained protruding from eye ball, the portion imbedded being the thicker part of the drill. It entered the eye while it was still rotating and the incision had to be materially enlarged before the drill could be removed. There was marked loss of vitreous and in my effort to save the ball it was necessary to take several stitches with which to close the wound.

Anxious days were spent by all concerned and the father of the young man told me I must take the eye out now and save the boy a long siege in the Hospital, as it would have to be taken out anyway before he could be free from pain and at work again, and in the meantime he would lose the sight of the other eye. With his father insisting on enucleation, my escape from the worry and anxiety incident to this case would have been exceptionally easy. But believing there was a fair fighting chance, coupled with an earnest desire on the part of the patient himself that sincere effort be made to save the eye ball, the battle went on.

This was one of my early traumatismes and with the idea fresh in my mind that the vitreous is extremely liable to infection I was ill

at ease to say the least. Of course, the eye is sunken, the cornea elliptical and cloudy and there are indentures in the sclera, but this young man congratulates himself that he does not need to wear nor be annoyed with an artificial eye. He reports no pain nor any other untoward manifestation during the six years since this accident deprived him of his sight in this eye.

Not all of these cases have been dismissed long enough to warrant certainty in permanent prognosis and I am aware that isolated cases do not argue for conclusions. But in all fairness I have given the history of every case that I have had in my nine years practice as a specialist which would be placed in the category of possibilities of those eyes threatening enucleation.

My contention is that I might have been justified in enucleating in every one of these cases and in fully one-half of them, other oculists, general practitioners or experienced nurses gave it as their opinion that it would be necessary to enucleate.

Sympathetic eye trouble following traumatism is no idle dream and should be always in the mind of the oculist, but he needs to fortify himself against this goblin of "sympathetic fame."

All will not agree with me that the possibility of enucleation entered in all of these cases, but you will agree with me that it would have been a shorter course to safety both for the patient and for the oculist had enucleation been advised and accepted. On the other hand I must contend that the saving of an eye ball, though blind is better for the patient and better for the oculist as well. In the cases which I have related, without exception, each and every one expresses himself as being much better pleased with having retained the eye ball than he would be in wearing an artificial eye.

As some general practitioners, who are well removed from any specialist, are coming to do enucleation, my plea is for him to obtain the judgment of an oculist before enucleating if at all possible; and secondly, my plea is for the oculist to give the patient the benefit of the doubt as long as it is at all consistent with safety.

ACUTE OSTEOMYELITIS.*

D. C. BROCKMAN, M. D., Ottumwa, Iowa.

The alert doctor must always be on guard for emergency cases. No matter whether he wants to do surgery or not, he must be able to make surgical diagnosis.

Formerly "emergency surgery" was always associated with accidents but today we know that the major part of emergency surgery is not the result of accidents, but due to internal causes; and,

*Read before Iowa State Medical Society, 1911. Section on Surgery.

as I said before, whether the doctor wants to do surgery or not, he must always be ready to make a surgical diagnosis, to differentiate between medical and surgical diseases.

The failure to do this; the failure to recognize the difference between rheumatism and acute osteomyelitis costs the lives of scores of children and makes permanent cripples of hundreds of others that might have been saved, had the doctor kept in mind some of the cardinal principles of diagnosis.

The doctor who will persistently, day after day, week after week treat a case of mono-articular rheumatism should not be allowed to practice medicine. One of the best known principles of diagnosis is that rheumatism is never confined to one joint for any length of time.

The doctor should make an examination of his patient every day instead of making his diagnosis the first time he sees the case and then, taking it for granted that his diagnosis is infallible, persist in treating the patient for the disease he first named it, instead of looking for a possible error in the diagnosis.

If this simple rule were followed, we would have immensely less funerals in the state and innumerable children would be saved from permanent deformity due to conditions that might have been quickly cured if proper diagnosis had been made.

Unfortunately this preachment is not made to the men who most need it. Men who attend this and other up-to-date medical societies are not the ones who make these blunders but it is the fellow who stayed at home today to watch your office door, hoping that he may pick up some of your patients while you are here trying to better prepare yourself for the treatment of these cases. It is the incompetent who never attends society that needs this kind of admonition and I know of no way that we can reach him.

The man who treats suppurative arthritis and acute osteomyelitis for weeks with salicylates, morphine and poultices is the same fellow that gives women ergot to control post climacteric hemorrhages; that paints lumps in the breasts of old women with tincture of iodine; watching them critically for cachexia or other "symptoms" of cancer.

They are the fellows that are well nigh hopeless, yet, they call themselves doctors, they are licensed to practice medicine but are doing far more harm than they do good.

We cannot reach them through medical societies because they do not attend them. Our papers in the journals have no effect on them as they do not take the journals; they do not need them.

There are only two ways that I know of through which the public can be saved from these ignorant doctors; one is by the slow process of death; but it is an unfortunate fact that these old fossils live

much longer than they should; the other is that you and I must go out as missionaries and do all we can to educate them; to impress some cardinal principles; to point out some of the danger signals that they may see the trouble that threatens their patients and not let them go beyond all hopes before they make a diagnosis and institute treatment promptly.

Let us try to teach them that a uterine hemorrhage in a woman passed the menopause is cancer. Let us impress upon their untrained minds that every lump in a woman's breast is a surgical condition and not medical; that if it needs any treatment whatever, it needs surgical treatment. Let us teach them that every case of painful limb in a young person, whether it be directly in the joint or near the joint, that is accompanied by temperature, whether there be any swelling or not, is a surgical disease and not infrequently one that needs very prompt, active surgical interference.

It is because I see so many cases of neglected osteomyelitis every year, so many children that are crippled for life that I am trying to bring this crude message to you in hopes that I may impress on the mind of someone who hears or reads this paper, the great importance of making a diagnosis in every case of painful affliction in a child or young adult.

Osteomyelitis is one of the most acute and most painful diseases that afflicts humanity. It is due either to infection from within or as a result of compound fracture, in which case the infection reaches the bone from the outside.

I will not discuss the cases due to fracture but leave that to someone else—but confine my remarks to a few of the salient points in the diagnosis of the acute type of internal origin. It is always due to infection from within; to pyogenic bacteria that are circulating in the blood. It probably reaches the circulation more often from furunculosis than any other one cause although it may have its origin in any form of suppuration, pneumonia, typhoid fever, scarlet fever, erysipelas or scores of other infectious diseases.

It occurs frequently after exposure to cold, after an injury or when the patient is over worked or reduced physically in some other way. About 60 per cent occurs in the second decade of life—although it may occur before ten years or during old age.

The common form of the disease begins in the long bones near the joint—most often near the knee, then the shoulder, elbow and wrist. It attacks the long bones ten times oftener than flat ones.

The infection usually occurs in the canal just above the epiphyseal line separating the shaft from the epiphysis—the products of inflammation being confined within the bony shell, there is no redness or swelling on the surface at first, but the contents of the medullary canal increases so rapidly that the pain is intense and the sep-

tic material being under pressure is rapidly absorbed and produces violent toxemia.

The temperature rises rapidly to 104 to 105 or even higher. Delirium or stupor from toxemia is not uncommon—the child lying in a stupor, with high fever and moaning with pain makes one think of some profound brain lesion.

At this time a symptom may be elicited that is of great value. A sharp blow over the diseased bone develops severe pain—due to the bone cavity being filled with fluid under pressure.

This is characteristic of the action of any cavity filled with fluid under tension—whether it be the gall bladder, the urinary bladder, a hydronephrosis or other viscus; percussion over the tense cavity always elicits pain.

As the pain is located so near the joint all too often the doctor jumps at the conclusion that the trouble is due to a sprain or rheumatism and treats the case accordingly—greatly to the detriment of the victim.

This is the point I want to impress on your minds today—rheumatism is never confined to one joint especially in children. This one fact, if thoroughly learned by every doctor in Iowa, would save untold misery and many valuable young lives.

The only things that can be mistaken for osteomyelitis are gonorrheal arthritis, acute tuberculosis of the joint or a pyogenic arthritis is not common in children but does occur occasionally. The pain is in the joint and is very severe, but the temperature is not so high.

Movement of the joint is far more painful than where the trouble is medullary—a local examination will discover gonococci at the point of primary infection—a leucocyte count will not show suppuration as in case of primary bone infection.

In acute tubercular arthritis (a comparatively rare condition) the joint rapidly swells, there is not leucocytosis and the pain is in the joint and not in the bone.

Much the same may be said concerning suppurative arthritis early—movement of the joint no matter how carefully made, causes increased pain. In all joint diseases gentle extension for a few minutes lessen the pain—in bone disease it does no good whatever.

In pyogenic arthritis the blood count will be the same as in acute bone infection but as the treatment of both are promptly surgical an absolute location of the point of infection is not so important provided free drainage is instituted in both conditions at the earliest possible moment.

I am not going into the pathology or the minute symptomology or extensively into the treatment of the condition—all this can be studied in the text book at your leisure.

My object today is simply to point out some of the most import-

ant diagnostic points so that the general practitioner may readily diagnose the condition at once and institute treatment before permanent destruction of bone occurs.

These symptoms are as follows: A previously healthy child is suddenly seized with very severe pain near a joint deep in the bone and not superficially, usually followed quickly by a chill and high fever—pressure over the painful area produces severe pain, gentle extension does not lessen pain—blood count shows marked leucocytosis early.

Now is the time to act. At once—not tomorrow—not this afternoon, but now—before noon—just as soon as these symptoms develop—before the pus under pressure, confined in the bony box, has time to destroy a large part of one of the most important bones in the body.

The treatment is simple and can be carried out by any one with a knowledge of anatomy, pathology and a grain of common sense. It consists of sterilizing the surface of the limb with tincture of iodine, cutting down on to the bone over the most painful area—pushing off the periosteum and trephining or chiseling through the bone and draining the pus from the medullary canal.

This much knowledge every doctor should carry with him every day of his life—ready to use it on a moment's notice. Not only should he know it but he should be ever ready to use it. Most of the blunders made by doctors are the result of inattention, carelessness in not analyzing all the symptoms and not to ignorance. The average doctor knows far more than his work shows—he has more knowledge than he uses.

The purpose of this brief paper is to impress a few facts so forcibly that they will not be forgotten.

1st. Rheumatism in children is never confined to one limb for any length of time.

2nd. Very severe pain in a long bone coming on suddenly in young person is probably either osteomyelitis or pyogenic arthritis.

3rd. Osteomyelitis must have immediate surgical treatment.

4th. Neglecting these self evident statements kills many and cripples many more children.

Discussion.

C. F. Wahrer, Fort Madison: Every word that has been uttered by the essayist is strictly true. But medicine is so wide in its field, so large in its application, that it is one of the easiest things in the world to accuse the other fellow of ignorance and want of attention. And yet it is true, as Dr. Brockman says, that men who should know better will treat an acute or even a chronic osteomyelitis, with an osteomyelitic history, probably, of tubercular origin, that had several outbreaks before, with poultices of Denver mud and hot applications and rest in bed and splints and other things; when if they would but go to it—I mean their library—for fifteen or twenty minutes of hard work, they would make

the diagnosis of osteomyelitis; and the treatment, in the hands of only fairly competent men, should yield good results. I don't know of a better way, however, to keep these things before the profession—"lest we forget"—than by just such precepts as this. I have now a case of acute osteomyelitis in a young woman of thirty, who has been treated for five weeks for acute rheumatism by a man with a fair reputation. Of course the proper treatment gives relief; open the place and drain it. The treatment is self-evident; it is not one of those puzzling things; but we must take warning and not treat everything for neurasthenia or hysteria or rheumatism, when some grave pathological trouble is at the base of all of it. It is fairly easy to make a diagnosis of osteomyelitis if you will simply use your reference library and a little bit of gray matter. If we will apply just two points it will start us in the right diagnosis: loss of function of the part, and the fact that rheumatism seldom affects but one joint for any length of time. Get these two fixed in your cerebral cortex and you will not often err.

RAYNAUD'S DISEASE

W. C. McGRATH, M. D. Eagle Grove, Iowa.

Raynaud's Disease, also known as symmetrical gangrene, may be defined as a neuro-vascular disorder, symmetrically distributed and characterized by three stages, local syncope, local asphyxia, and local death, one or all of which may appear in the same case. It was first described by Raynaud, a French physician, in 1862. Twelve years later he wrote a treatise on the subject and but little has been added to our general knowledge of this disease, up to the present time. The disease is rare, being variously reported as occurring in proportion to 1-1000 to 1-3000 cases of illness. Osler says that 19 cases were observed among 23000 patients admitted to the Johns Hopkins Hospital during a period of 20 years. It usually occurs between 15 and 45. One case is reported in a child of 10 and 2 cases over 50 years of age. 60 percent of cases occur in females. The onset is usually sudden. Duration varies from 10 days to 5 months. 1st. and 2nd. stages may last from a few minutes to several days. Period of gangrene usually lasts 3 weeks.

Etiology. But little is known. The disease occurs in healthy people and the actual cause remains obscure. In the majority of cases however, there is predisposing constitutional defects such as anemia from any cause, syphilis, tuberculosis, diabetes, and Bright's disease. It occurs coincident with cardiac lesions, hemiplegia and Graves' disease. Exposure to cold, fright, acute infections especially malaria. In some cases the malaria parasite was positively demonstrated.

Prognosis. Recovery is the rule. No deaths have been reported. It is apt to recur year after year.

Pathology. Changes in nerves and vessels are secondary in importance. Endarteritis may be due to accompanying syphilis. Hemiplegia may be caused by thrombus from coexisting cardiac affections. There are no bone lesions. Gangrene generally of dry from may affect fingers, toes, nose, or ears.

Diagnosis. Is generally easy. The characteristic symptoms being acro-asphyxia, a white and cold condition of the extremities, alternating with heat and redness and gangrene. It will have to be distinguished from arterio-sclerosis, diabetes mellitus and Bright's disease, endarteritis, frost bite, phlebitis, poisoning by ergot, senile gangrene, thrombosis and embolism.

Arterio-sclerosis by absence of hard surface arteries; diabetes mellitus and Bright's disease may be excluded by analysis of urine; endarteritis by absence of syphilis and arterio-sclerosis; frost bite may be excluded by the absence of history of exposure to cold; phlebitis produces moist gangrene; poisoning by ergot by history of not having taken ergot or eaten rye bread; senile gangrene age of patient confined to one extremity spreads slowly; thrombosis and embolism do not often occur spontaneously and symmetrically.

Symptoms. Pain either mild or severe tho not circumscribed is present in all cases. Hyperesthesia to touch is common. The memory becomes impaired. Mental depression, hallucination, or mania may exist. Convulsions, amblyopia, and epileptiform attacks occur. Brain disturbances due to angio-spasm. There is no fever.

Treatment. Is symptomatic. Improve the general health as much as possible. Give morphine hypodermically to relieve pain. Atropine and strychnine has been recommended. Bier's treatment and electricity seems to do good.

History. W. J. R. White, male 61. Was born in Kentucky. Moved to Ill., and lived there on a farm until 10 years ago when he came to Iowa. After coming to this state he drove on a mail route for 6 years. He had malaria when 9 years old. Never used tobacco or alcohol. No venereal disease. Nothing further of interest in past history.

Present trouble began 4 years ago when he suffered from a slight stroke of paralysis which produced paresis of right arm and leg and some disturbance of speech. He recovered in the course of a year so that he could walk with a cane. He had another stroke of paralysis in June 1909. He recovered from this except his power of speech which remained slow and aphasiac. His memory however continued to fail until he lost all recollection of recent events. About Jan. 1st, 1911 he began to complain of pain in his legs. This pain was not circumscribed but seemed to be general and continued on through the course of the disease. About the time the pain began it was noticed that his toes were undergoing frequent changes of col-

or. At a certain time of day one or more toes of the left foot would be found to be pale, even a chalky whiteness. An hour or two later these toes would be very red or purple. Similar changes would take place on the right foot but not to the same extent. These alternations followed each other for several days when a blister appeared and the tissue underneath turned black. Two toes underwent a process of dry gangrene and two spots each about the size of a dollar became necrotic and sloughed out. The toes were amputated 4 months later and the stumps healed. The ulcers filled in slowly. All these necrotic areas were on the left leg and foot. None of the spots on the right leg reached the 3rd stage. His skin was hyperesthetic and he often complained loudly when strips of adhesive plaster were removed. There was no evidence of arterio-sclerosis. He had a slight hypertrophy of the heart. There was a constant irregularity of rhythm and frequent intermission of the pulse. But there was no dyspnea or cough and no murmurs, no edema or other evidence of myocarditis. No fever at any time. He had one convulsion on May 30th, and remained unconscious for about 24 hours. This was followed by paresis of left arm and leg but he recovered in a few days so that he was fully as well as before the convulsion. Repeated analysis of the urine failed to show any albumen or sugar. No blood count was made. His hemoglobin varied from 50 to 60 per cent.

I have already described the most important symptoms of my case and I will close by giving my impressions as they occurred to me. Aside from the gangrene described there were no structural changes. All his symptoms were evanescent showing that the derangement was in the brain or spinal cord and that they consisted of ischemia and congestion the same as the changes which occurred on his feet and legs. He complained at times that he could scarcely recognize his friends by sight. There were times when he could not recall the names of his best acquaintances. He would sweat for 2 or 3 days at a time. Constipation alternated with diarrhea. Occasionally he had to be fed by the nurse, then again he would eat as much as he did when in health. He had several attacks of mania. When these spells came on he would not sleep night or day but would shout at the top of his voice, calling names of persons that he knew in his youth but whom he had not seen for years. These disturbances all passed off, leaving him apparently as well as before. So far as I could determine but two cases over 50 have been reported. This man was over 60. Another peculiarity was that the gangrene was not symmetrical. His first stroke was in Jan., 1908, second in June, 1909 and third in Oct., 1911.

Van Buren County Society met in Keosauqua, April 25th and elected Dr. E. W. Pahl as president; Dr. E. E. Sherman as secretary and Dr. R. N. Cresap of Bonaparte as delegate. The next meeting is in June.

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D. S. FAIRCHILD, M. D.	Clinton
EDITOR	
C. A. BOICE, M. D.	Washington
ASSOCIATE EDITOR	

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The Burlington Session of the State Medical Society.

The recent Burlington session of the State Society may easily be regarded as one of the best in the history of the organization. Many will remember the meeting in Burlington in 1893 and can make their own comparisons as to the differences between the two. A number of papers were read at our recent meeting that offered subject matter that had not been thought of even so short a time ago as nineteen years. To the thoughtful practitioner of medicine and surgery, these reflections are suggestive of what may be the character of the papers presented at a meeting, say nineteen years hence. Not only does this relate to the subjects presented for scientific discussion, but also in relation to the character of the organization.

In 1893 the Society was a delegate body, but it was not divided into sections as now, namely a business and a scientific section. The business was conducted at the general meetings, interfering very much with the scientific work. Turning to the volume of transactions for 1893, I find that 28 papers were read, and the papers and discussions filled a volume of 134 pages, and that there were 124 members present and the session was three days as now. At the meeting nineteen years later, there were 373 members registered and there were 58 papers read. If one would look over the volume for that session, they would be impressed, as above mentioned, by the difference in the character of the papers.

I notice among other things a striking demonstration by Dr. C. E. Ruth of Keokuk, on the use of the Murphy button in intestinal surgery. This was supposed to reach the highest point of specialism

in this branch. It seems remarkable sometimes to reflect that in so short a period this special method of intestinal anastomosis has passed through all its stages of development and has been laid aside for a more certain and reliable method, namely that of suturing.

Coming to the 1912 meeting, all will agree that the management of the Committee on Arrangements was skillful and successful to the highest degree and that the Program Committee had worked out a program of great merit. The writers of papers were nearly all present, discussions were prompt, and well distributed and to the point. Much more of this should be attributed to President Littig than will be generally known. Dr. Littig to my personal knowledge commenced very early in his administration to work up the details of a successful meeting and he was untiring in his efforts to the very end. Not only did he have frequent conferences with the Committee on Arrangements, but with the other officers of the Society and the chairmen of sections. He was fortunate in selecting men of energy and judgment and skill in scientific and professional matters. He was fortunate in selecting the proper men to deliver special addresses. Those of Dr. Plummer, Dr. Dock and Dr. Kopetsky were of great merit and contained many thoughtful suggestions. Dr. Littig was ably seconded by the Committee on Arrangements at Burlington, and we may properly say of the entire profession of Burlington. From personal observation, it seemed to me that the profession in Burlington took unusual pride in having the Society come there, and I feel sure that the Society appreciates the sentiment expressed both in public and private entertainments. The provisions for the meetings of the association were excellent. The general auditorium where the meetings were held, was well located and well adapted to the purpose.

There has been a feeling in the Society that meeting on one side or the other of the state, endangered the interests of the Society, in that it lead to smaller attendance. This meeting has proved in fact, that if the local profession are thoroughly in earnest in providing for the meeting and the officers of the Society are energetic and forceful men, and are able to provide the profession with a strong and fruitful program, that enough interest can be excited among the profession to lead to a reasonably large attendance. It is not therefore a question of geography so much as the question of spirit, and I think that Dr. Littig has shown to the profession what could be done if enthusiastic spirit could be instilled into the minds of those who are responsible for the success of our medical organization.

A neat exhibit room was arranged near the Headquarters Hotel, apart from the General Session. Quite a number of attractive booths were prepared.

The Kress & Owen Company, the Abilena cathartic water company, the Ambulatory Pneumatic Splint company, the Anti-Narcotin Sanitorium, Borden's Malted Milk, Welsh Grape Juice Company had space, displayed their products and called attention to the good qualities. Among drug firms were the Standard Chemical company, of Des Moines, the Kremers-Urban company of Milwaukee and the Reed & Carnrick company.

The instrument houses, particularly those appealing to the eye men, were well represented: Sharp & Smith; the F. A. Hardy company; and the Geneva Optical company, all of Chicago, displayed the instruments of percission. Especial attention was called to Blood Pressure apparatus, Ophthalmoscopes and Retinoscopes.

The Roessler and Hasslachner Chemical Company of New York demonstrated the Autogenor, which is an appliance to be used in the generation of nascent oxygen. To this may be attached chloroform and ether containers and the anesthetic vaporised by the oxygen generator.

The exhibits were not made obnoxious. They were well visited, but did not detract from the scientific sessions.

The registration totaled 373 almost a record number for a meeting away from the center of the state. The place of the general session was well chosen—cool, well-seated and lighted, quiet and not too large. It was easy to hear all the speakers and President Littig took care that each speaker gave his name and came forward where he could be seen and heard.

These annual gatherings are a great stimulus to the worker. All the real busy men are in attendance, those who think they are busy don't attend. We have frequently noticed that those men who are the most active, the ones who are well in the advance of the profession always have time to attend the county and state societies, in fact, they can't afford to miss them. The Burlington meeting, just closed was a very helpful and stimulating one; the papers and discussions were timely and exceedingly practical. The addresses and orations were especially well prepared and well delivered. We fail to see how any practitioner can afford to miss these annual gatherings.

The Henry County Society elected Dr. F. R. Wilson, of New London as president, Dr. G. M. Van Ausdall, as vice president, and Dr. O. A. Geeseka, of Mt. Pleasant as secretary, Dr. F. C. Mehlror, of New London, as delegate, with Dr. C. F. Applegate as alternate.

Dr. V. L. Treyner of Council Bluffs, for several years secretary, was elected President. Dr. C. P. Frantz of Burlington was elected First Vice-President and Dr. E. E. Dorr of Des Moines was chosen as Second Vice-President. Dr. W. B. Small of Waterloo was re-elected Treasurer and Dr. J. W. Osborn of Des Moines was chosen as Secretary. The 1913 meeting will be held the second week in May in Des Moines.

Very many expressed themselves as well pleased with the arrangements of the Burlington Committee. Everything went off smoothly.

The boat trip up the Mississippi was a pleasure. Excellent music, a pleasant evening, a good lunch made a thoroughly enjoyable evening.

Quite a number of our professional brothers from Illinois took occasion to attend the sessions.

President Littig's arrangement of the program into the main divisions—Medical and Surgical—and alternating the papers carried the interest to be maintained and attendance kept up at all times.

Don't forget to write to Senators Cummins and Kenyon and your congressman telling them of your interest in the Owen Bill. The Bill has been reported favorably by the committee to the senate and will be up for action during the present summer. You may rest assured that the opponents of the Bill—The League of Medical Freedom—are active and keep the congressmen informed of their desires. If only one side is represented, you know what the result will be. Write those letters now, and get others to write, especially Woman's clubs. Petitions from such organizations help. Do it now.

The Cerro Gordo County Society reports Dr. C. E. Dakin as president for 1912, Dr. W. L. Sterns as vice-president, Dr. V. A. Farrell as secretary-treasurer, Dr. F. E. McGlone as censor, Dr. W. F. Egloff as delegate with Dr. E. McEwen as alternate.

The Dallas-Guthrie County Society met at Panora, Thursday, April 18, and listened to this program:

"The Significance of Pain in the Upper Abdominal Region."—Dr. S. J. Brown, Panora; "Acute Gastritis"—Dr. F. W. Bush, Bagley; "The Diagnosis and Treatment of Gastric Ulcer"—Dr. J. T. Strawn, Des Moines.

A. M. A. News.

The American Medical Association will meet in Atlantic City, New Jersey, June 4 to 7, 1912.

Official Route: The Pennsylvania road has been selected as the official route from Chicago, and the Iowa delegation will have two Pullmans, forming a part of the A. M. A. Journal Special, leaving Chicago at 3:00 p. m., Sunday, June 2nd and arriving at Atlantic City early the next afternoon. The train will consist of Compartment Observation Car. Standard Sleepers, Library Club Car and necessary Dining Cars.

Rates: On June 1st. there will be on sale at all Iowa points, thirty day summer excursion tickets to Atlantic City and return, at approximately one and one-half fare, or \$29.25 from Chicago, and all Iowa points same mileage ratio. Pullman rates to Atlantic City will be, Drawing Room \$18.00, Compartment \$14.00, Lower Berth \$5.00, and Upper Berth \$4.00.

Accommodations: The rate will be on same basis to New York, and those interested should buy tickets there and deposit them at Philadelphia for stop-overs and re-buy round trip excursion tickets to Atlantic City and continue their trip. In order to do this our special will go via Broad Street Station, Philadelphia. Tickets will be honored returning via Washington without extra charge, providing they are so routed at time of purchase.

Reservations: All those expecting to make the trip should write at once for hotel accommodations, to insure satisfactory reservations. Two twelve section Pullman sleepers have been reserved for our Iowa delegation and as one is now filled, those who wish reservations should promptly notify Dr. J. W. Cokenower, Des Moines, or Mr. L. C. Kimball, assistant Passenger Agent, 175 Jackson Blvd., Chicago.

Nostrum Advertising.

"While the medical profession is making a great hue and cry about patent medicines and quack doctors, and lampooning the editors of newspapers and popular magazines for their selfish attitude in accepting advertising from such perpetrators of fraud, it may not be amiss to look at some of the inconsistent practices on the part of supposedly reputable members of the profession. It is our opinion that the most of us live in glass houses and have no right to throw stones. For instance what right have we to complain about the advertising carried by newspapers and magazines when we not only tolerate but support medical journals that carry the worst kind of nostrum advertising? What right have we to complain of the grafting done by the quack doctor when so-called reputable medi-

cal men will operate for the sake of the fees and will not only give or accept the commission but will actually traffic in the ills of humanity in a manner that would do credit to Captain Kidd. Surely the medical profession needs a house cleaning and the sooner we begin, the better.”—Journal Indiana State society. Apropos to this, the plain spoken editor of the California State Journal says some plain things about the appearance of Mayo, Ochsner, Crile, Carstens, Engalls, Binnie, and others, in the pages of the January number of the “American Journal of Surgery” which carries from 15 to 20 pages of Glyco-Thymoline and Pepto-Mangan type of advertising. It appears that this enterprising journal saw the advantage of having this list of famous names appear as a group in a single issue. These gentlemen are shrewd and watchful men and we cannot but admire the skill of the editor of the “American Journal of Surgery in catching them.—Editor.

National Department of Health.

In a recent issue of La Follette's Weekly the personal organ of Senator Robert M. La Follette, appeared an editorial on “Government Care of Public Health” a part of which is here reprinted:

“The speech of Senator Works of California from the standpoint of a Christian Scientist in opposition to the bill so ably championed by Senator Owen, has attracted wide attention to the subject of establishing a national department of public health.”

“We must concede that if one believes there is no such thing as sickness or disease, then all scientific research into cause and prevention, quarantine and sanitation laws, and crusade against carriers and sources of contagion, must appear useless.”

“But if we believe disease and sickness deplorable facts in human life, just as we believe health and vitality desirable conditions then we must be anxious that the work done by our government for these objects should be encouraged, correlated, and brought to the highest efficiency.”

“If we want pure food, cold storage conditions regulated, mosquitoes, flies, rats and other carriers of fever and plague exterminated; if we want the spread of tuberculosis, meningitis, and children's diseases stopped; if we want child labor laws, limitations of hours of women's work, proper health conditions in our public schools, then we should favor a national department of health.”

“Scattered through all the various departments, State, Army, Navy, Interior, Agriculture, these subjects are now being considered in various ways. I pick up at random from my desk a report of the Marine Hospital. It relates to plague prevention work, cholera, leprosy, small pox. It publishes municipal ordinances pertaining to public hygiene, care of milk, protection of food stuffs, garbage

collection, sanitary and plumbing code. One report of the Department of Agriculture is a treatise on the extermination of hydroprobia; another relates to "How Insects Affect Health in Rural Districts." The latest report from the Bureau of Education is a volume on school houses in their relation to health.

"It seems to me a reflection on our national intelligence and a commentary on our commercialism that the nations of Europe should have departments of health and education and we should be content to have these great fundamental subjects scattered about in different bureaus, as though they were of secondary importance in our national life."

"The opinion seems to have gained wide credence that the department is to be organized to promote some school of medicine. Nothing could be more erroneous. Mr. George H. Shibley, a resident of Washington in high standing, devoted to public interest, whose wife is one of the ablest osteopathic physicians in the country made this statement to the Senate Committee holding hearings on the bill: "It being a settled fact that the control of the licensing system is in the States and there being in the States no tendency to surrender that power, it follows that the osteopathic physicians, the homeopathic physicians and the eclectic physicians whose occupations are licensed under State laws are in no danger from a national health department. The need for the establishment of a national health department is most pressing. The people are less protected from disease and death than are their cattle and hogs. A properly conducted department of health can do for the people in general what the Department of Agriculture is doing for the farmers. All of the people are vitally interested in the Department of Agriculture." —West Virginia Medical Journal, Dec., 1911.

The Owen Bill.

Chicago papers state that the Woman's Club in Chicago passed over the Owen Bill without any notice whatever. It appears that effort was made to induce the club to endorse this bill but it seems that Mrs. Coonley-Ward came from New York with a full determination to prevent any consideration of this bill. The argument was that the bill was in the interest of a certain school of medicine known as the allopaths, that it was against the interest of homeopaths, eclectics, osteopaths, etc. It is strange that these assertions should be made in the face of the fact that the bill is specific in its statement that it has not and can have no relation whatever to schools of medicine, that it does not in any way affect the qualifications of practitioners, that it has nothing to do with the qualifications of practitioners. It points out most emphatically that it is purely a health measure. There is only one conclusion that can be arrived at

in relation to this matter, and that is that these people are working under pay from some source and are willing to openly and brazenly falsify the whole matter, as they appear to see in this falsifying the strongest argument they can offer in opposition to the bill. The profession therefore should be watchful of this method of opposing the bill and be constantly on the look out to meet the argument.—D. S. F.

New Department at Johns Hopkins.

The Johns Hopkins University has created a new department to be known under the general title "Art as Applied to Medicine." Its purpose is to bridge over the gap existing between art and medicine and to train a new generation of artists to illustrate medical journals and books. In view of the fact that medical illustrating is midway between art and medicine, it is proposed that the instruction given be designed for the needs of two classes; for medical students and for artists.—Texas State Journal of Medicine.

Drake University Alumni Clinics.

April 17th and 18th were days given by the faculty and the alumni of Drake University to a series of clinics, lectures, and demonstrations. These were attended by a considerable number of recent and of older alumni purposing to get a great deal of pleasure and profit out of the meeting. The session closed with a banquet at the Savory Hotel, which was generally attended by the alumni of Des Moines and by the faculty, and many alumni outside of Des Moines. These annual gatherings for social, clinical, and scientific purposes, are of very considerable benefit to a group of men who have been associated in certain educational interests. Not only are they of advantage to the school itself, but to the profession generally. It gives an opportunity to the alumni of various schools to ascertain what progress has been made in the particular institution. Members of the alumni that are most likely to visit the alma-mater, are the ones who probably look closest into the work the college is doing and if the institution is not living up to their standards of what it ought to be, criticism is liable to follow, so that is helpful for the college to submit itself to the scrutiny of its graduates; and then to the graduate himself it is of great advantage to measure the advancement made in the science and practice of medicine since he was a student. He carries away with him the impression that medical science is progressive, taking for instance, Drake University School of Medicine. The graduate of but a few years ago on looking over the college laboratories and hospitals and hospital facilities, will find himself gathering a certain amount of enthusiasm in his profession and getting into the way of feeling that

he ought as far as possible make up for some of the deficiencies of his own training and to help develop a healthy and sound professional spirit. A meeting of the faculty and alumni of Drake is no new thing. Institutions have taken up this before and I think everybody connected with the movement has been benefitted thereby. I am told that those who attended Drake University reunion were very strongly impressed with the advantages of a clinical session over that of a paper session or a session where papers were read and discussed.

The Journal feels like encouraging the young men of different medical institutions to attend as many such clinics and demonstrations of their colleges as possible. It will certainly be helpful in developing the college spirit. One of the things that has made so many schools influential is the college spirit, a thing which cannot be measured entirely by money or even equipment. One of the things that has made Jefferson Medical College so strong is the college spirit hovering around the institution. The University of Michigan spirit, the University of Pennsylvania, and the Harvard spirit has had immense influence upon the profession, not only upon the graduates of these institutions but upon the profession in general, so that the Drake University spirit and the State University spirit are factors that should be cultivated, as they will be of immense influence in the future.

Training of Nurses.

Augustus S. Downing, M. A. L. L. D., First Assistant Commissioner of Education of the State of New York, in an address published in *The American Journal of Nursing*, says some interesting things in relation to the training of nurses at the University of Minnesota.

"I am deeply interested in the nurses training school in the University of Minnesota. There, it seems to me, is a school organized on the right principles. They require a physical examination of every candidate for admission, and unless she can stand the test the individual is rejected. Then they give that young woman four months of preliminary training before she is admitted to the hospital at all. She pays \$25.00 for this. She is independent, just as the students in the normal school here, or in Columbia University, or elsewhere, are independent. She lives where she pleases, and does what she pleases, outside of the fact that she must do the work of this course, and at the end must satisfactorily prove it. At the end of the preliminary training she is given a month (two months) of probation; she is taken into the hospital to see whether after all, she is fit to train, whether she can be trained or whether she cannot; whether she has human sympathy enough, whether she can take the

professional course; and after a month (two months) of probation the Superintendent of the Nurses Training School and a Committee of the School determine whether the girl should be admitted or not. Then, after that, she has about two and a half years of training in addition. She is permitted to work only eight hours. That includes her theoretical training, her professional training in the nursing home and her work in the wards, and she is never allowed to work along side of the bed of a patient unless there is a trained nurse there to direct her."

It seems to me that Minnesota has started the problem of nurses training in the right direction; that is, going at it in a direct, straightforward way, instead of going around it from the rear; and I believe that Minnesota will out-distance the other states in no very long time in the question of training nurses as they come from her training school connected with the University.

Columbia University has done a great work in its post-graduate course, but a post-graduate course means after some other course. This is the first course."—The Journal Lancet-Minneapolis.

This is quite different from the Nurses' Training Schools connected with many of our hospitals where very little trained supervision is given and the girl is left to her own resources; a few lectures are given, often by doctors who have had no experience in teaching. At the end of her course her entire fund of real knowledge could be measured up in a very small measure. A large part of the time of these nurses in training is given to menial work whereby the hospital is saved the expense of hiring more help.—Editor.

Hyperpyrexia.

Dr. Milton B. Lennon of San Francisco records a case of "Extraordinary Temperature." The case was under medical care of St. Francis Hospital. When Dr. Lennon first saw this woman she was clearly hysterical and a rectal temperature showed 105 degrees; by 8 o'clock in the evening it was 107 degrees and at midnight 109 degrees. The patient some time before had had a miscarriage and was curretted but had practically recovered when the hysterical outbreak occurred with the temperature above recorded. On the following morning an examination by Drs. Kerr, Gallwey, Graves and Alden, failed to reveal any physical change to account for the temperature. The temperature advanced to 111 degrees. In the afternoon dropped 2 degrees and then to below the normal. The next morning the temperature rose to 110 degrees and a little later to 114 degrees. In a few days she recovered and left the hospital. Shortly after this the temperature went up to 115 degrees. Dr. Lennon states that the temperature of the urine on the last observation agreed with the rectal temperature i. e. when the rectal temperature

was 105.4 the urine was 106 and when the rectal temperature was 115 the urine was 115.—California State Journal of Medicine.

Several years ago a similar experience came to us. A patient suffering from a severe functional nervous trouble came under our care at Mercy Hospital, Clinton. One of my assistants was called to the hospital in my absence, on account of a rapidly rising temperature. When he arrived at 8 p. m. the temperature per rectum was 105, an hour later 106 and at midnight had reached 115. At one o'clock the temperature began to drop and at 9 a. m. was normal. After this hysterical storm had passed she returned home and remained well. Five different physicians examined this woman and as many different thermometers were used with the same result. She was carefully examined and watched to guard against fraud and we feel quite sure that the temperature was correct.—Editor.

Gall Stones.

Dr. W. J. Mayo controverts the old idea of gall stones without symptoms, and contends that the percent of gall stones estimated by some good authorities is incorrect. He believes that 5-10 per cent in all cases is more correct and that 5 to 8 per cent for women and from 2 to 4 per cent for men after 50 years of age is nearer the truth. Dr. Mayo is of the opinion that the theory of innocent gall stones is an unfortunate contention and subjects the patient to a dangerous risk, among which is the risk of cancer. In his cases 2.25 per cent had carcinoma of the gall bladder.—Journal A. M. A. April 8,

The Precancerous Stage.

Dr. Parker Syme of New York in the New York State Journal of Medicine for Sept. 1911, discusses the question of the Precancerous Stage.

"No more serious problem than the question of cancer presents itself both to the medical man and to the layman. So far it has baffled our investigations as to its actual entity and as to its actual causes. We do not yet know whether it is due to micro-organism or not. Though it is steadily on the increase, we have not yet been able to determine the reason for this fact. Of course the more modern methods of recording and studying vital statistics are giving us an ever clearer means of recognizing the importance of this disease as a factor in determining the cause of death in our communities."

The writer contends that observation and experience show that there is a distinctly precancerous stage when a well planned operation will cure most of the cases, and that so far as our present knowledge goes, this is the only hope of lessening the mortality from cancer.

Dr. Syms claims that 15 years ago "permanent cure of cancer of the breast was effected in only a desultory way in only a few isolated cases, while today we are able to cure at least 50 per cent of breast cancers and in selected series of cases we may expect to cure as high as 80 per cent of these cases."

Dr. John B. Murphy in No. 1, Vol. 1 of the "Murphy Surgical Clinics" takes a different view as the question now stands. He says: "I believe the final results in carcinoma have not been materially improved in the last quarter of a century. All you have to do is to look over the statistics of the men who have made the maximum number of operations and analyze the histories of their cases or their reports. You will find, of the cases that have no demonstrable lymphatic metastasis at the time of operation, that these patients remained well in a considerable percentage of the cases exactly as they did with our forefathers in surgery, who excised the breast tumors and did nothing else. When there were demonstrable metastases, you will find there was a sudden drop in the percentage of permanent cures, etc."

Dr. Murphy deprecates extensive dissections in carcinoma in the following language." The futility of an extensive operation in carcinoma of the breast can be estimated from the percentages of recurrences that take place in the osseous system and the liver, but particularly the osseous system, following excisions of the breast in which there is no demonstrable return in any portion of the breast before the patient exhibits the disease in a bone or the disease terminates fatally." This brings us back to what has been designated as the precancerous stage when the erratic epithelial cells are still localized in the growth and before they have been transmitted to other structures. The manner in which these erratic cells pass to the next lymphatic or lymph space has not been shown and therefore we are ignorant as to how these early metastases occur. Quoting again from Dr. Murphy: "We do know, however, that in carcinoma, scirrhus in type, bound and indurated in its local position, when there is a strong connective tissue reaction in the primary lesion, there is quite a strong resistance to the metastatic lesions, which makes me believe that this resistance is more constitutional than local, because in every position it is the same type of resistance. You can infer that and say possibly the cells are less malignant; but if less malignant, why do you have so great a coffer-damming of tissue to take care of. It is in those cases that have a firm, strong, resisting fibrous capsule around a nest of epithelial cells that the tumor is of slow growth and slow in metastases." —D. S. F.

Polk County Society met at the Savery April 30. Dr. T. P. Bond presented a paper on Pneumonia in Children. Dr. W. E. Sanders one on Remarks on Diabetes.

A Comparative Investigation of the Effects and Toxicity of Sodium Salicylates of Natural and Synthetic Origin.

Torald Sollmann writes (Arch. Int. Med. Dec. 15, 1911, P. 784) that: "There is a very prevalent, although not quite universal, belief that salicylates prepared synthetically are less effective, and especially that they are more dangerous and more toxic, than salicylates prepared from the 'natural' methyl salicylate; that is, from unadulterated oil of wintergreen or oil of sweet birch. This subject is of great practical importance, on account of the extensive use of salicylic compounds in medicine and the tendency and often the absolute need of pushing the dosage to the very limit of tolerance. If there is in fact any material difference in the effects, prescribing should certainly be confined exclusively to the less dangerous variety." Pointing out the importance of definite information.

"In the clinical literature I have not so far encountered an attempt, even a serious, unbiased attempt to solve the question by accurate and controlled observations. Much of the sentiment against the synthetic drug seems to be based on isolated unfortunate occurrences, such as might also occur at times with the 'natural.' Somehow, one is reminded of the old proverb, 'Give a dog a bad name,' etc."

"Experimentally, there seems to have been but one series of observations, namely that of Charteris and Maclellan. Judging from the frequency with which these observations are quoted by the advocates of 'natural' salicylic acid, it is evident that they have been generally considered pertinent, valid and important."

"But even granting the presence of dangerous impurities in some samples of synthetic salicylates as they were on the market in 1889 when Charteris' experiments were made—granting all this, it would not follow that synthetic salicylates marketed over twenty years later would, of necessity, be equally impure or equally dangerous."

"In view of the importance and uncertainties of the question, the Research Committee of the Council on Pharmacy and Chemistry has planned a thorough-going investigation, along both clinical and experimental lines."

Sollman then summarizes the results of J. A. Waddell, whose report follows Sollmann's discussion, and who found that the two kinds of sodium salicylates had the same effect on rats, cats and rabbits, thus:

"1. Can the conclusions be extended to man? The extensive use of which has been made of Charteris' results by the opponents of synthetic salicylates fortunately saves us the necessity of replying to the line of argument which is usually put forward when experimental evidence conflicts with commercial interests."

"The cautious will always be careful in extending animal experiments to the human subject, and will keep an open mind until the clinical checks have been made. However, it may fairly be concluded that if a toxic impurity were really present in the synthetic samples, it would have manifested its dire effects in at least one of the three widely differing species of animals (cats, rats and rabbits) which were here used."

"2. Can the results be extended to all samples of synthetic salicylates? To this there can only be one answer: The fact that two samples of synthetic salicylates were pure does not prove that all samples are pure. It does prove, however, that there is no cause for the indiscriminate condemnation of all synthetic salicylates, even the purest; and moreover, that the cheapest 'stuff' supplied by drug-stores is not necessarily dangerous. If the cheapest brands are just as good as the 'natural', it is probable that the standard 'synthetic' brands are also good."

"The matter is altogether too important, however, to warrant relying on mere probabilities. Certainly can be attained only by the direct examination of all, or practically all, of the brands on the market, and by the examination of individual samples to which bad effects have been charged. This is quite feasible, since a very few experiments on the uniformly reacting rats will give data of sufficient accuracy. Dr. Waddell already has this investigation under way, and the four synthetic samples which have been examined so far, in addition to the two brands reported in this paper, fall within the ordinary limits of toxicity of the natural salicylates."

"In conclusion I wish particularly to call attention to the concluding request of Dr. Waddell for samples suspected of producing untoward effects."

Fractures of the Tarsal Scaphoid.

Some years ago a case of tarsal scaphoid fracture came under our care. The fracture was caused by direct violence and was compound; the injury did not involve the other bones of the foot. The fractured bone was excised and the foot placed in a marked varus position retained by plaster paris. We had seen so little on this subject in medical literature that we were not prepared to say how much effect the loss of this bone would have on the strength and usefulness of the foot. It is now three years since the accident occurred and there has been no appreciable impairment of function.

In the December, 1910 number of *Annals of Surgery*, page 845, there is an article by Drs. Mac Ausland and Wood of Boston reciting two cases of fracture of the tarsal scaphoid treated by them by excision of the fractured bone. These authors reach the following conclusions:

"Fracture of the tarsal scaphoid, although rare, may occur without fracture of other tarsal bones. In both cases, swelling and tenderness existed over the scaphoid. Ankle joint motions were normal, but a marked limitation in inversion was present and in abduction at the mediotarsal joint. Correction could not be attained by manipulation. Excision of the scaphoid seems justifiable, and remarkable, in that the static condition of the foot is not weakened but markedly improved in the two reported cases by this procedure. In new cases where the injury has just occurred, the deformity occurring would suggest the foot being put in plaster in a marked varus position."

Lange of Cincinnati believes such fractures to be more numerous since the use of radiography.—D. S. Fairchild.

Calcification and Ossification.

In the June, 1911 number of the "Archives of Internal Medicine" appears an interesting paper by Dr. H. Gideon Wells of Chicago on Calcification and Ossification. (Harvey Lecture delivered March 25, 1911.)

"With the double topic of Calcification and Ossification before us, we may probably begin by ascertaining whether we are here concerned with two separate processes, or with two manifestations of a single process." Dr. Wells then goes on to show that "the essential differences between ossification and calcification seem to be chiefly morphological." In calcification we have deposits in dead tissue or in tissues of low vitality of inorganic calcium salts. Within such deposits there are no living cells, and no further change takes place in the calcified area unless it be absorption or addition of more calcium salts. "In normal ossification, however, the homogeneous calcium deposits are closely related to living cells, which not only determine the form of the deposit, but which also are able to dissolve the insoluble salts, or to cause their deposition as may be needed, thus rendering the inorganic salts of bone the reserve supply of a tissue of active metabolism. Beyond the fact that calcification consists of deposits of lime salts in non-living cells and ossification deposits in living cells there seem to be no differences between normal ossification and pathological calcification." In each case the insoluble salts are laid down in a matrix especially prepared to receive them; in bone formation the homogeneous acellular matrix of the cartilage; in calcification some acellular necrotic tissue, or more especially, homogeneous elastic fibres or hyaline degenerated connective tissue, each of these latter bearing marked structural resemblance to the hyaline matrix of the cartilage or osteoid tissue. Dr. Wells under the head of "Pathological Calcification" points out that "the most striking evidence of the relation of calcification

to ossification is the frequency with which we find an area of pathological calcification of some dead tissue undergoing a metamorphosis into true bone" and "that when areas of calcified pathological tissues remain long enough in the body, ossification will take place in a certain proportion of cases, irrespective of any proximity or relation to bone tissue" for instance in the eye, lung, etc. "The process by which these inert dead calcified areas are converted into living bone tissue is entirely analogous to the normal formation of bone in endochondral ossification. The calcified material simply takes the place of the primordial cartilage, vascular granulation tissue eroding it, the cells of the granulation tissue undergoing a differentiation into osteoblasts which constitute an osteogenetic layer and form the new bone. When there is no preliminary calcification of a necrotic tissue, we get no subsequent ossification, and it seems that the calcium salts exert a specific influence on the connective tissue cells which cause them to take on active growth, and to undergo a metaplasia, not only into osteoblasts and bone corpuscles, but apparently even into narrow cells with hematogenetic function, since according to Bunting and others, the evidence indicates that the marrow tissue which so commonly accompanies pathological ossification is derived from the proliferated connective tissue cells."

"The essential part played by the calcium salts in stimulating osteogenesis is further demonstrated by Barth's experiments on the healing of defects by implantation of dead and living bone. He found living bone thus implanted always dies, and then the dead bone is replaced by a process of substitution, new layers of osteoid tissue invading and replacing layer by layer the dead bone. If the bone is dead and sterile when implanted, or if ashed bone is used, the results are quite the same. Calcium sulphate placed in bone cavities also favors rapid ossification. If, however, decalcified bone is similarly implanted it is quickly absorbed, and is replaced by fibrous tissue, without ossification except such growth of bone as may invade the scar tissue from the living bone tissue about the margins.

We regret we cannot give space to a more extended review of this valuable paper.—D. S. F.

The Lee County Society had last year the largest membership in its history—45. The officers expect to exceed that number during the present year. The society meets twice yearly, alternating between Ft. Madison and Keokuk. The attendance at the meetings equals two-thirds of the membership. The society invites prominent men in from outside to address the members. Dr. T. R. Washburn, of Donnellson, an active member of this society, died at his home recently.

The public health committee has been active. Tuberculosis Sunday, several physicians occupied pulpits throughout the county.

MEDICINE IN IOWA FROM ITS EARLY SETTLEMENT TO 1876.

D. S. FAIRCHILD, M. D., Clinton, Iowa.

Medical History of Linn County.

Linn County, one of the most important and influential counties in Iowa, has always had able and original representatives of the medical profession. Unfortunately detailed records of the earlier physicians are not accessible and we are obliged to rely on isolated facts and recollections of the men who first located and practiced medicine in Linn county. The county has grown so rapidly in population and its cities and towns have developed in all the material elements of comfort and luxury to such a remarkable degree that it is impossible for the citizens in these prosperous communities to realize the hardships which the earlier practitioners of medicine were obliged to undergo, or appreciate the peculiarities which the pioneer physicians must have developed in the environment of 60 years ago.

The notes for this history has been kindly furnished by Dr. Frederick G. Murray of Cedar Rapids. We shall take the liberty to make some additional observations based on personal knowledge of the medical men of earlier days.

The first physician of whom there is any record, to locate in Linn county, was Dr. S. H. Tryon, who came to Marion as early as 1838. Dr. Tryon was a well known public character. He acted as county clerk and held many positions of honor. Dr. T. S. Bardwell came a little later, settled on a farm near Marion in 1840 and became a leading physician of Marion. It seems probable that Drs. F. W. Tailoe and James Cummings came a little earlier; it is said before 1840. It appears that Dr. T. W. Phelps came about the same time that Dr. Bardwell did. Dr. J. K. Rickey purchased John Young's claim in Cedar Rapids as early as 1841 and must have been located in the vicinity at that time. What became of him is not known. It is questionable if he engaged actively in the practice of medicine. At that time there were not many whites in Cedar Rapids and these few had other things on hand than to get sick unless it was homesickness and we are assured that Dr. Rickey had no remedy for this affection.

The first real practitioners who came to Linn county were Dr. Magnus Holmes and his brother-in-law, Dr. Henry M. Ristine. In 1841, Dr. Holmes came to Marion from Crawfordsville, Indiana. His life and work seemed full of promise but he died soon after locating in practice. Dr. Henry M. Ristine, born in Madison, Indiana, in 1818, came to Marion in 1842, where he practiced until 1874 when he removed to Cedar Rapids. Dr. Ristine was for many years one of the best known physicians in Iowa. He was a man of high ideals and thoroughly devoted to his profession; the money side of his work was but secondary and incidental. It was our privilege to know Dr.

Ristine both in relation to the profession and in relation to his patients. There are two standards by which we generally measure professional men, one, the character of the work done and the other, the kind and extent of clientele. Dr. Ristine could be measured by both standards. No man had greater occasion for self gratulation than he over the character of his following. Dr. Ristine was elected President of the State Medical Society in 1877 from the floor, the Committee on Nomination, having reported in favor of another candidate. Not only was Dr. Ristine distinguished as a physician and surgeon but also as a public spirited citizen. His work with that of friend Judge Green in founding St. Luke's Hospital, is gratefully remembered, and the portraits of these distinguished patrons have been reverently placed on its walls. Dr. Ristine's work has been ably continued by his much esteemed son, Dr. John U. Ristine. His death occurred at Cedar Rapids in 1893 at the age of 75 years, while engaged in active professional work, (from hemiplegia). A sad feature connected with the Doctor's helpless condition and shortly before his death, was the sickness and death of his wife, who was thus deprived of the aid and comfort of her husband in her last hours and he fully conscious of the unhappy fact.

Another early practitioner of Linn County was Dr. Sam Grafton who located on the Cedar River at Ivanhoe Bridge, on the old military road from Dubuque to Iowa City, one of the oldest settlements in the country. When he came is not known. Dr. Grafton had practiced for some years previous to 1847 in which year he fell a victim to a typhoidal epidemic.

Dr. Amos Witter was one of the first physicians in Mount Vernon. He was for several years a member of the Legislature. Dr. Witter died in 1862 at the age of 55 years. In 1866 there was still living in Viola a Dr. S. S. Matson who had practiced there since 1845. He graduated from the University of Vermont in 1832. The same year Dr. Elisha W. Lake, an early Marion physician, graduated from the Ohio Medical college. These two men from the point of graduation were the oldest men the county has had.

The first physician to locate in the northern part of Linn county was Dr. Stacy who lived on the Anamosa road near Boulder Church. Dr. Stacy was a brother of the late Judge Stacy, the pioneer promoter of the Dubuque & Southwestern Railway. Some of the other early practitioners were Dr. E. L. Mansfield who came to Cedar Rapids or Kingston in 1847, Dr. J. M. Traer who made Cedar Rapids his home from 1847 to 1851, Dr. J. F. Ely who came to Cedar Rapids in 1848, and Dr. S. D. Carpenter who came in 1849.

A business directory of Cedar Rapids, published in 1856, gives the following list of physicians.

Dr. S. C. Koontz, Dr. J. H. Camburn, Dr. W. D. Barclay, Dr. J. W. Edes, Dr. Smith, Dr. Farroler, Dr. T. T. Taylor.

A more complete city directory, published in 1869, gives the names of Drs. C. F. Bullen, J. H. Camburn, G. P. Carpenter, J. P. Coulter, J. W. Edes, Mansfield & Smith, Freeman McClelland, John North, Israel Snyder, C. H. Thompson, W. Bollinger, J. C. May. Of these early physicians, Dr. Camburn and Dr. Edes were prominent in their profession for many years. Dr. R. R. Taylor, a Virginian, moved to Philadelphia about the time of the Civil war. Dr. J. C. May was a druggist as well as a very popular physician. He was a brother of the late Major May of Island fame.

The Medical and Surgical Directory of Iowa, published in 1876, gives a list of 50 physicians practicing in Linn County at that time. Of this list only 6 remain; Dr. Geo. P. Carpenter and Dr. G. R. Skinner of Cedar Rapids. Dr. T. S. Kopler of Mount Vernon, Dr. Hindman of Marion, Dr. Edwin Burd of Lisbon and Dr. Yost of Center Point. The last of these, Dr. Yost, a graduate of the University of Pennsylvania, class of 1853, is the oldest living practitioner in the county. His two sons are now associated with him in his work. Dr. J. H. Smith of Cedar Rapids has not been in practice for many years but maintains a close relation to his old calling through the presidency of the board of directors of St. Luke's Hospital. The two Sigworths are still living near their old neighborhood, having retired to Anamosa.

Among the early physicians of Linn County may be found several who gained prominence in interests outside the practice of medicine. Dr. John F. Ely at the close of his medical course in New York became interested in manufacturing and commercial enterprises which gradually drew him from an excellent practice, but to the end of his useful business life, he maintained an active interest in medical science. It is said that Dr. Ely performed the first autopsy in Cedar Rapids.

Dr. S. D. Carpenter after the Civil War, gave up the practice of and became interested in building and financing railroads in Iowa and in the South with great success. Dr. Carpenter is living at a hale old age in Chicago.

Dr. Freeman McClelland was a graduate of Jefferson Medical College, a talented physician who gained an enviable popularity and influence as editor of the Cedar Rapids Times, a man of rare personality whose editorials gained him an enduring remembrance.

Dr. J. T. Houdley who became eminent as a platform lecturer, is said to have been the first to "hang out a shingle" in Cedar Rapids. He is now living, retired, in Philadelphia.

Dr. G. W. Holmes, a son of Dr. Morgan Holmes, one of the earliest physicians of Marion, after finishing his medical course at Bellevue, went as a medical missionary of the American Board to Persia. He became Royal Physician to the Crown Prince, who was afterwards

made Shah of Persia. Dr. Holmes died in June, 1910.

The following is a list of surgeons from Linn county who served in the Civil War:

Dr. H. M. Ristine, Surgeon 20th Iowa Infantry; Dr. J. F. Ely, Surgeon 24th Iowa Infantry; Dr. J. H. Camburn, Surgeon 16th Iowa Infantry and 6th Iowa Cavalry; Dr. Freeman McClelland, Surgeon 16th Iowa Infantry; Dr. H. M. Lyons, Surgeon 16th Iowa Infantry; Dr. John F. Smith, Assistant Surgeon. 65th Iowa Infantry; Dr. G. L. Carhart, Surgeon, 31st Iowa Infantry; Dr. J. C. Shrader went from near Western College with the 22d, as Captain and later as Surgeon.

Dr. T. S. Bardwell served as 1st Ass't. Surgeon with the 6th Iowa Cavalry, Col. Koskoden commanding, notably in an expedition against the Indians who were threatening the Nebraska and Dakota frontier.

Dr. Seth Byam of Jackson Township was a surgeon in the U. S. Army.

Dr. Seymour D. Carpenter was a surgeon in the U. S. Army and served during the war.

Dr. J. P. Coulter served as Lt. Colonel of the 12th Iowa Infantry. He was afterwards active in city and county politics, who came to Cedar Rapids in 1871, served during the Civil war, leaving the service with a captain's commission.

Dr. W. H. French served through the war with the 89th Iowa Infantry.

In addition to Dr. Henry M. Ristine, Dr. J. S. Love of Springville, was also devoted to his profession. His kindly face was an inspiration to his associates and his words of cheer and encouragement not only to his patients, but to all who came within the sphere of his influence. It was the good fortune of the writer to know him well and to enjoy the benefits of his friendly counsel.

Dr. James Carson of Mt. Vernon, Dr. D. McClenahan of Cedar Rapids and Dr. G. L. Carhart of Marion, were also devoted to the practice of medicine and are gratefully remembered. These men did not enjoy the advantages of the science of modern medicine but contributed greatly to the fund of experience which made modern medicine of such immense value to the succeeding generation. Their constant presence at the councils of the profession, contributed greatly to the present organization which has done so much to advance the healing art.

The Linn County Medical Society was organized in 1859 at Mt. Vernon by Drs. Love, Ely, Ristine, Carson and Lyon. The meetings were suspended during the war but were revived in 1866. In 1873 its name was changed to the Iowa Union Medical Society which continues as an influential organization with two meetings a year.

The present Linn County Medical Society was organized in 1903 as a part of the state and national organization and meets twice a year. The enterprising town of Mt. Vernon has a medical organization known as the "Practitioners Club", which meets once a month.

St. Luke's Hospital was founded in 1883. It has a consultant staff. The consulting staff consists of Drs. G. P. Carpenter, J. M. Ristine, G. R. Skinner, G. E. Crawford, A. B. Poore, A. H. Johnson. The hospital has a capacity of 75 beds. Recently a full maternity has been added.

Mercy Hospital with 90 beds was completed in 1902.

Cherokee County.

Cherokee County's first white settler, Robert Perry, located in 1856. The next year, in 1857, the first members of a colony from Milford, Mass., arrived, under the leadership of a physician, Dr. Dwight Russell. Dr. Russell practiced very little, prescribing for those members of the colony who were afflicted with slight ailments, and did not locate here permanently. The prevalent disease at that time was "fever and ague."

Dr. Levi Rogers located in Pilot township in 1866. He was a Scotchman, a bachelor, and very eccentric. A very large man, he lived in a tiny cabin near the river bank, and slept in a box like an undertaker's rough box. To call him at night, one had to halloo across the river, and he would come rowing across in a little boat. Then the message was taken, or the patient ferried across to have his tooth pulled, as the case might be. So far as is known Dr. Rogers had no diploma, but had some medical education, and did fair work for a pioneer physician.

Dr. M. S. Butler, a graduate of Keokuk, arrived in 1868, and after living 5 years on a homestead, moved to Cherokee, and devoted himself exclusively to the practice of medicine. He was a hardworking physician, rough in exterior, but kind in heart.

Dr. R. L. Cleaves located in 1870, moving here from Cedar Rapids, where he had practiced a year. Dr. Cleaves had been Hospital Steward of the 16th Maine Volunteer Infantry during the war, and subsequently got his medical education in Bowdoin and Harvard, graduating from the latter in 1869. He has practiced in Cherokee constantly since 1870, and is still in practice.

Dr. West, an Eclectic, and a graduate of a St. Louis Medical school, located in 1871, and, after remaining about 2 years, went to Primghar, O'Brien County, and still later abandoned practice.

Dr. J. A. Sherman, another graduate of Keokuk, located in 1873. He was a very successful physician, and an enterprising business man.

Dr. M. F. Pritchard, a homeopath, located here in 1874. He is still in practice in Cherokee.

BOOK REVIEWS.

A Surgical Treatment of Locomotor Ataxia. By L. N. Denslow, M. D. Fellow New York Academy of Medicine. Late Physician, Diseases of the Skin (Out Patient) Bellevue Hospital New York; Late Professor Genito-Urinary Surgery and Venereal Diseases, St. Paul Medical College, Minnesota. London W. C. Bailliere, Tindall and Cox and Henrietta St. Covent Gurch. Number of Pages X118- Price 3-6 net (\$.85.)

This book treats of a very interesting subject, no less than the successful treatment of locomotor ataxia by surgical means. Dr. Denslow states that he finds that in male subjects in every case of this disease, without exception, an abnormal condition of the urethra exists, and that by treatment directed to this condition many of the symptoms of the disease e. g. the pains, ataxia, visceral crisis, sensations profonde, hyperesthesias, anesthetics, and incontinence of urine and feces, may be cured or alleviated, and the disease itself at least held in check." This serves as the basis of Dr. Denslow's theory and treatment of the disease. He does not offer any new or novel method of surgical procedure only the application of remedies to relieve certain abnormal conditions that exist in the urethra which primarily irritate the "peripheral nerves producing reflex disturbances in the spinal cord and brain, and that such irritation kept up continuously for a sufficient length of time can and does produce pathological changes in the cord." Dr. Denslow admits "that permanent pathological changes are irreparable and in that sense a cure is out of the question."

If Dr. Denslow is correct in his conclusions it is of the greatest importance that the disease be recognized in its early stage and the condition of the urethra carefully inquired into and the proper treatment employed. This is a problem that can be worked out only in one way, and that is by observation and experience. The subject is so important and the ordinary methods of treatment so unavailing that we would urge every general practitioner to read this book carefully and carry out the treatment suggested conscientiously.—D. S. F.

COMPENDIUM.

of

DISEASES OF THE SKIN

Based on an analysis of thirty thousand consecutive cases with a Therapeutic Formulary by

L. DUNCAN BULKLEY, A. M., M. D.

Physician to the New York Skin and Cancer Hospital; Consulting Physician to the New York Hospital; Consulting Dermatologist to the Randall's Island Hospital, to the Hospital for Ruptured and Crippled, and to the Manhattan Eye and Ear Hospital, etc.

Fifth Revised Edition of the manual of Diseases of the Skin. 8vo., cloth, 300 pages \$2.00 net. Paul B. Hoeber, Medical Publisher, Bookseller and Importer, 69 East 59 st. New York, 1912.

The book is a practical one, intended for the general practitioner more than for the specialist. Especial emphasis is given to diagnosis and treatment, and practically all the space is given to the common-every-day skin diseases. Practical common sense therapeutics is insisted upon. The book is divided into twenty-one chapters covering fully the many skin manifestations, the parasitic diseases, neuroses, exsudations, hemorrhages, atrophies and neoplasms. The final thirty pages are devoted to diet, hygiene, and therapeutics.

We heartily recommend this book as being a practical treatise on skin diseases, clearly and compactly written, concise in its statements, a book you need.

The Food and Drug Division of the Department of Agriculture has published a series of "Notices of Judgment," being prosecutions and convictions of the Food and Drug Act. The pamphlets now number 1250.

The Hygienic Laboratory of the P-H and M-H Service publishes many valuable and useful pamphlets and treatises. Milk and its Relation to Public Health is a book of 800 pages, well illustrated. Milk as a cause of, or its relation to various epidemics is fully investigated.

The extremely valuable books put out by the Government Departments are a great number. If you are interested in Typhoid, Leprosy, Sewage Investigation, Rats, and Flies, as disease breeders, we advise you to get in touch with the P-H and M-H Service.

W. B. Saunders Company have just issued a new (16th) edition of their Illustrated Catalogue which describes some forty new books and new editions published by them since the issuance of the former edition.

The books listed in this catalogue cover every subject of interest to the medical man. The descriptions and illustrations are such as to enable the reader to select easily just the book he wishes on any branch. It is really an index to correct medical literature—an index by which the practitioner, the surgeon, and the specialist can acquaint himself with what is new in the literature of his subject.

This edition also contains an illustration and description of Saunders's new building, now being erected on Washington Square Philadelphia's new publishing center.

Any physician wishing a copy of this handsome catalogue can obtain one free by addressing W. B. Saunders Company, 925-Walnut Street, Philadelphia.

"Physiology, a Manual for Students and Practitioners." Price \$1.00. "Guenther". Lea & Febiger, Philadelphia and New York.

The authors set forth clearly in the preface to the second edition their excuse for offering the facts of physiology in this condensed form. It is designed simply for review purposes where time is an important consideration. The book shows great care in attention to numerous details which ordinarily are omitted from these manuals. One thing that impresses the reader particularly is that the authors have included all the facts found in the usual text books on physiology and at the same time have made the subject matter easily perused. The clear and forcible style stimulates interest and avoids monotony.

The chapters on secretion and on blood and lymph particularly are comprehensive, while the chapters on muscle and nerve recall vividly physiological laboratory methods. The numerous questions at the end of each chapter are valuable when you consider what the authors hoped to accomplish by the book. It was evidently not intended to supplant any text book or be introduced into medical curricula for general use so the work is commendable for the purpose for which it was designed.—W. L. Mendenhall, M. D.

DEATHS.

Dr. J. N. Day, a well known physician of Mt. Pleasant died Sunday evening at his home on East Washington street from heart trouble passing away before a physician could arrive. He was in his usual health Sunday, he attended church at the chapel in the morning; he posted a letter in the mail box near the house about six-thirty Sunday evening and retired shortly after nine o'clock. He remarked that he believed something he had eaten had soured his stomach, and had complained of being dizzy at church in the morning. Other than this he had not complained during the day of not feeling well. After making the above remark he and Mrs. Day talked briefly about other things, and in a very few minutes Mrs. Day noticed him breathing heavily and unnaturally. A few breaths more, and almost before she realized it, he had stopped breathing, the heart was still, and life was no more. Dr. Day was born Oct. 2, 1850 in Indiana and grew to young manhood in that state. He graduated from a medical school in Cincinnati, Ohio, and came to Iowa forty years ago locating in Pilot Grove, Lee county, where he began the practice of medicine. He was married to Miss C. G. Balding, of Libertyville on May 7, 1874. He moved to this city from Pilot Grove just 24 years ago the last of March. Dr. Day is survived by his wife and three children, Mrs. Etta Larkin of Winfield vicinity. Dr. Archie L. Day, of Trenton and Miss Mabel Day of this city and one grandchild Donald Day. Two sisters, one living in Kansas and the other in Nebraska, also survive him.

Norman Riley Cornell, M. D. Geneva Medical, N. Y., College, 1847. Came to Knoxville, Iowa, from Cromwell, Ky., in 1850. Veteran of the Civil War, Ass't. Surgeon of the 23d Iowa Vol. Inf. Regimental Surgeon of the 40th Iowa Vol. Inf., mustered out with the regiment in 1865. In 1901 met with a railroad accident, which confined him to the hospital for six months. Prior to his injury, he was in active practice and an active member of the Marion County and Iowa State Medical societies. Was ex-president and a charter member of the Marion County Medical society, organized in January, 1872. For a number of years was surgeon for the C. B. & Q. R. R. Died at his home April 9th, 1912, from effects of cerebral embolus, aged 88.

SOCIETY NEWS.

The Washington County Society met in Washington, April 17. A good program had been prepared and a good attendance expected, but the weather man ruled otherwise. The entire day was given over to a snow storm, still three men; Drs. Parks, of Brighton, Huston of Crawfordsville and Hammer of Kalona, drove fourteen miles to attend. Two very instructive papers were read—one on Follicular Tonsillitis by Dr. H. C. Hull and one on Typhoid fever by Dr. L. A. Hammer. In addition to those above named, Drs. C. A. Boice, J. H. Hull, J. C. Boice, G. W. Hay, E. R. Jenkins, R. H. Dean, C. W. McLaughlin, C. W. Stewart, H. F. Masson, were in attendance. Dr. W. S. Huston was elected president; Dr. C. W. McLaughlin as vice-president; Dr. C. A. Boice as secretary-treasurer; Dr. W. S. Parks as censor; Dr. E. R. Jenkins as delegate with Dr. Parks as alternate. The society will meet in Crawfordsville the latter part of May and in Brighton the latter part of July.

Dr. W. E. Orndoff, of Broughton, Pa., a regular 1910 graduate desires a position as locum tenens or salaried position as assistant in institutional work. If interested, write the doctor as above addressed.

The Des Moines County Society reports thirty-two members and the secretary, Dr. Bertha McDavitt sends this report:

Number of meetings during the past year, 10. Average number present, 14. Our society is in a prosperous condition, and the interest in the meetings seems to be increasing. This we think is due to the fact that we are adopting a new plan as to the programs. We are taking up a topic for each meeting, and having a Symposium on the subject, different phases being discussed by different individuals. For instance, since the first of the year, we have had the following topics: Obstetrics; Diphtheria, Gastric and Duodenal Ulcer; Appendicitis. We have invited to assist us with these programs physicians from outside the society, whom we know have had large experience, and in this capacity it has been our pleasure to entertain and listen to, the Drs. Wahrer, of Ft. Madison, Dr. Chauncey Sherrick, of Monmouth, Dr. C. S. James, of Centerville, Dr. Herrick, of Ottumwa, Dr. Dorsey, of Keokuk, besides having some very able papers from our own membership.

The Monroe County Society met at the office of Dr. H. C. Eschbach in Albia, April 18. Dr. Jenkins read a paper on Acute Indigestion; Dr. Miller one on Blood Pressure, Means and Importance of Ascertaining; Dr. Moran presented a paper on Diagnosis of Valvular Heart Lesions; and Dr. Stafford presented the subject of Hernia; Dr. Magarian presented the subject of Tubal Impregnation. The secretary insists on the importance of clinical cases.

Woodbury County Society reports an active membership of fifty-three, Dr. E. A. Jenkinson is president, Dr. A. N. Sloan is vice president, Dr. J. P. Dougherty is secretary, Dr. R. M. Conway is treasurer Drs. Wm. Jepson, C. P. McHugh and J. H. Darey are censors and Drs. J. A. St. Onge and L. W. Prescott are delegates

The Appanoose County Society met at the Drake Library, Centerville, April 25th. The society has arranged for a permanent meeting place in the library and has the nucleus of a library and a book stack has been set aside for the use of the society. The program for the April meeting was: Acute Endocarditis—Dr. W. J. Fenton; Myocarditis—Dr. W. L. Downing, Cardiac Neurosis—Dr. C. S. Hickman. Demonstrations of clinical cases was a prominent feature of the meeting.

The Bremer County Society held a special meeting in Waverly, May 1st, and had a good attendance. The following officers were elected for the ensuing year: Dr. L. C. Kern, pres., Waverly; Dr. D. S. Bradford, vice pres., Janesville; Dr. H. H. Ennis, sec'y. Tripoli. Dr. W. A. Rohlf was elected delegate to the State Society and Dr. L. C. Kern alternate. The next meeting will be held at Waverly in June at which time a scientific program will be given.

A clinical meeting of the Fremont County Society was held at the Court house in Sidney, Apr. 4. Dr. H. J. Piper was elected president for 1912; Dr. T. C. Cole as vice president; Dr. A. E. Wanamaker as secretary-treasurer; Dr. T. C. Harris as delegate with Dr. B. B. Miller as alternate. The society will meet in Tabor, June 25.

THE JOURNAL OF THE IOWA STATE MEDICAL SOCIETY

D. S. FAIRCHILD, M. D.....Clinton
EDITOR

C. A. BOICE, M. D.....Washington
ASSOCIATE EDITOR

Vol. 1. Clinton, June 15, 1912 No. 12

Address of the President

IOWA STATE MEDICAL SOCIETY—SIXTY-FIRST SESSION—BUR-
LINGTON, MAY 8, 9, 10, 1912.

L. W. LITTIG, M. D., DAVENPORT.

OPENING.

Members of the Iowa State Medical Society and Honored Guests.

From time immemorial it has been the privilege of the presid-
ing officer of this and like societies to deliver an address which is
the reflection of living issues as seen by him. Guided by this custom,
I shall review a few questions as seen from my point of observation,
and through such glasses as I may wear. Mine will be a plain un-
varnished tale. But first let me assure you that I can not express
the great appreciation I feel because of the high honor conferred
upon me one year ago. The honor came unsought, hence all the more
precious and all the more appreciated. I was so happy in my mem-
bership, was having such a good time, so heartily enjoyed, and so
much profited by the meetings, that I never gave this high office a
single thought. I have one burning wish, that I may continue an
active worker in the ranks, I hope to be more interested in the wel-
fare of the society than ever before. If I have ever been a useful
member, I hope to be more useful in the future. I thank you all
from the bottom of my heart for the many tokens of affection I have
ever received from you, not only during the past year, but also dur-
ing my illness of several years ago. It was during that illness that
I learned better than ever before that doctors were a red blooded
big-hearted lot of fellows, and that it is good to be one of them. I
thank you again.

THE IOWA STATE MEDICAL SOCIETY.

The Iowa State Medical Society has reason to congratulate it-
self on the spirit of good fellowship that has characterized its meet-
ings in the past. I do not believe there is another medical society
in the United States in which the members are less influenced by

selfish motives than in the society to which you and I have the honor to owe allegiance. In the Iowa State Medical Society, fellow members, we do not know the meaning of the word politics. We have no factions, no cliques, no ins, and no outs. What is best for the society, is the one question ever at issue. So long as this happy state of affairs continues, and I believe that it will continue always, the Iowa State Medical Society is sure to make rapid progress in the fulfillment of its mission.

It has sometimes been said that it is difficult to secure a place on the program of the annual session. Nothing can be farther from the truth. I assure you that the program committee and the various chairmen are anxiously looking for the very best men to read papers. If the best men are not secured, it is because they are not known. If any member wishes to read a paper before the society, let him on several occasions discuss the papers of others. If he does this well, he is a marked man, and from that time on it will be impossible for him to keep off the program. It is to be regretted that the scientific program can not be published at least two months before the meeting, to give ample opportunity for every member to prepare himself thoroughly on several of the subjects that are coming up for discussion. Desirable as this should be, it is not an easy matter to accomplish.

THE HOUSE OF DELEGATES.

To confide the business of the society to a small body of men known as the House of Delegates was a wise provision of the plan of reorganization. It is sometimes said that the society is not really a democratic body, that its affairs are managed by a relatively small number of men. There is a little truth in this statement, and it will continue to be true until county societies elect delegates that will attend the session, and that will attend all the meetings of the House of Delegates. Sometimes at the meeting of third morning of the session there is a bare quorum present, and of those many are in attendance as a delegate for the first time. Naturally those who know what should be done and how to do it are very apt to point the way. To make the business end of this society truly democratic, to give every county a voice in the business affairs of the society, send as delegates members that will attend the meetings, that will familiarize themselves with the needs and the working methods of the society, and having found such a member return him year after year. To be a delegate means work and honor. The member who considers only the honor and shuns the work will never make a good delegate.

I believe it would be a very good plan for all county societies to hold the annual meeting for the election of officers during the month of December. The delegates selected would thus have ample

opportunity to familiarize themselves with the needs of the Society. The names could be sent to the Secretary of the State Society sufficiently early to print a correct list of delegates in an early issue of the Journal. There can scarcely be any objection to this plan, and there is certainly much in its favor.

THE JOURNAL.

The House of Delegates, at the 1911 Session, in Des Moines, passed a resolution authorizing the Board of Trustees of the Iowa State Medical Society to take over the advertising of the Iowa Medical Journal, but at no time had the Iowa Medical Journal indicated a willingness to accept the offer made by the society, and later decided not to do so. Hence the Board of Trustees established the Journal of the Iowa State Medical Society, an act entirely acceptable to all parties concerned.

Owing to a ruling of the Post Office Department, this new Journal was not permitted to carry advertising without paying a rate of postage so high as to leave little profit on the advertisements carried, and the new Journal was started without advertising. Later, the Post Office Department so modified its ruling as to permit advertisements in the Journal, provided the subscription price of the Journal is not included in the annual dues, but is kept separate and optional. Arrangements to carry advertising are now practically complete, and advertisements will soon appear, which will very materially lessen the cost of the Journal.

I feel that the Journal of the Iowa State Medical Society has been a great success. The editorials have been forceful and to the point, and have correctly and lucidly represented professional sentiment on the living, and, I might say, the burning questions of the day. The scientific matter has been good, as was to be expected from the list of contributors. Excellent as has been the record of the Journal during its first year, I am sure that it will continue to improve with each succeeding issue, and that it will attain high rank among the State Journals of the country.

However, I can not refrain from making one little suggestion. I believe that the annual session of the State Society should be featured in the April number of the Journal, and that everything pertaining to that annual session should, so far as possible, be front page matter.

COUNTY SOCIETIES.

The county society occupies a high place in the factors that make for individual and collective progress. In fact, I firmly believe that the work of county society is a correct index of the professional attainments of its members, and of the character of the service rendered the public. A dead county society means that it

is not fulfilling its mission. In order to improve, to keep abreast of the times, medical men must frequently meet in convention, to discuss medical topics. No statement needs less corroboration than this, so evident is its truth. These meetings reciprocally stimulate. It is so often said that physicians should join medical societies and do society work to improve the medical profession. I feel very much like saying that physicians should join societies and do society work to improve themselves. Let the motive be selfish, let it be self improvement, because whatever improves the individual improves the entire profession, and the quality of the service rendered the public, and hence makes for the public good. I am almost ready to confess that I attend medical societies for selfish motives. I always hear something that sets me thinking, that stimulates me to better effort, that makes me try to be a better doctor. I do not attend meetings with the thought of improving the profession. I am not so conceited as to imagine that my presence is essential to the common good. To imbibe new ideas, to receive inspiration, to enjoy the fellowship of my co-workers, these are my motives.

The county society is most important because its meetings are held frequently, and because it gives practically every member an opportunity to take an active part. If the members regularly attend the meetings of the county society, read papers as often as the program committee will permit, and always prepare themselves to discuss the papers presented by others, the meetings are sure to be profitable, not only to the individual, but to the entire professional body. The program committee of the county society should always invite case reports, these reports to be carefully prepared and accompanied by a brief review of the up-to-date literature on the subject. Simply to report a case without such careful study is not very profitable either to the member making the report or to the society. The best way to stimulate interest in medical society work is to have interesting and frequent meetings. It is so much easier to prepare a program a month or two months in advance, and if the subjects be announced at least one month in advance every member will have an opportunity to prepare himself to take an active part in the discussions. Every member is interested in the meeting in which he takes an active part. He feels that it was a good meeting, just as the old lady insisted that the prayer meeting was a most excellent one, because she lead in prayer. In this state there are several county societies that will serve as models, notably in Ottumwa, Centerville, Ft. Dodge, and Lisbon. These societies arrange their meetings months in advance. A little group of men at Lisbon, Linn county, has met every two weeks for the past two years, sometimes with but three (all the doctors in the town) in attendance, sometimes with quite a number of doctors from neighboring towns. The meetings have always been interesting, and they have resulted in much bene

fit to those that took part. The work of the medical men of the little town of Lisbon may well serve as an example of patient, persistent and successful county society effort. A county society which meets but once or twice a year, or which mails its program one or two days before the meeting, is valueless so far as benefitting its members is concerned.

The ideal method of conducting society meetings is that adopted by the Wapello County Society. In this county the program for the entire year is prepared and printed at the beginning of the year, and issued in a neat little pamphlet. I should urge every county secretary in Iowa to write Dr. J. F. Herrick, of Ottumwa, (Wapello County) for pointers on County Society work. There can be a very good county society wherever four or five doctors can get together once or twice a month. I am not very enthusiastic over members that simply pay their dues but never attend the meetings. Personally, I consider them dead, lying high and dry on the banks, and far from the busy stream. Their annual dues are accepted, but they do not stimulate their fellows and are not stimulated by them, they neither give nor receive, they are ciphers in the society and society work, and almost invariably dead ones. I wish to say here that a county secretary, that fails to send immediately after his election a written invitation to each member of the society, asking when it will be convenient for that member to make his annual contribution to the society, and who further fails to mail the program at least one month before the meeting, is inefficient and incompetent and ought to receive the treatment that the food fakers planned for Dr. Wiley. The program should be mailed a few days before the meeting, but each program should, in smaller type and in less conspicuous display, carry the program of the following month. Better still to have each program announce the papers to be read the two following months. It stimulates the writer of a paper to have it known that he is under observation, it makes him feel that something is expected of him. This plan gives others ample opportunity to prepare their discussion. I again call attention to the Ottumwa (Wapello County) plan, which is best of all.

It has been said that there are too many district societies, that they detract from the county society and from the state society. Personally, again, I do not share this opinion. I believe that the men that attend the district societies are the most regular in attendance and the best workers in the county society, and most active in the state society. However, I am most firm in my conviction that membership in the state society should be a necessary qualification for membership in every medical society. I do not believe in the so-called "free lance" societies. The more good societies the better. Let a doctor get the medical society habit and he is always in at-

tendance at his county, district, state, national, and special societies, but of these the county society is most important.

MEDICAL DEFENSE.

For some years the State Medical Society has defended its members when wrongfully sued for alleged malpractice, and this phase of society work has been taken up in twenty-two other states. It is sometimes said that malpractice suits are often secretly encouraged by unprincipled competitors, or by so called experts for a fee. That this is sometimes true can not be denied, but sometimes I fear these suits are due to an uncompromising attitude on the part of the doctor in the presentation of his bill for services. It must not be forgotten that, no matter how just the claim for services rendered, even a successfully defended suit for malpractice is a very expensive procedure in time, money, and reputation, and that it cost will more than offset the fee involved. There is no such thing as getting glory out of a suit for malpractice. The doctor, even if the case be taken from the jury, is sure to be blamed by a certain number of people in the community. It involves an unpleasant, distasteful notoriety. Good advice is, do not resort to the courts to collect a fee, if by so doing a malpractice suit may result, unless your management of the case will stand the severest criticism. Do not indirectly invite a suit for malpractice simply to vindicate your position. The medico-legal committee was called upon to defend a \$15,000 suit where the patient offered to pay \$60 and the doctor insisted upon \$75, and here they stuck. This suit cost the society several times the amount of the original bill, and was finally dropped, the doctor collecting his fee in full. But I do not believe that he is the gainer by the transaction.

To prevent suits, whenever the case is such that the result at the best may not be satisfactory to the patient, secure early and efficient consultation. If there is a possibility, however remote, that the case may be the cause of trouble in the future, secure still more early and efficient consultation, do not wait until the patient requests you to seek additional advice, suggest consultation yourself even before beginning treatment. All fractures should be seen by a second doctor, the best doctor within call, all of them should be X-Rayed before and after setting, and on discharge. In all fracture cases, the patient should receive specific instructions, nothing should be left to chance. If the patient be asked to report at a certain time, let the record show whether or not he did so. There must be fewer malpractice suits, or the society will have to raise its dues very materially.

The medico-legal committee has never concerned itself with the defense of any member unless said member was unjustly sued, but I think I may say that, in some instances, a little more descretion on

the part of the doctor, or a consultation, would have avoided the trouble entirely. Do not forget that a successfully defended suit for malpractice is expensive in time, worry, and reputation. It is far better to go a long way round to avoid one.

HOSPITALS.

Hospitals are increasing in numbers and should be most important aids in securing the best treatment for many conditions. But too often they are but poorly equipped for the work undertaken. Too often the visitor is shown a magnificent operating room, while the all but mythical laboratory is located only with difficulty. X-Ray work is poorly done, bed side notes are but poorly kept, the instruction to nurses is not systematic or serious, and the pathologist and the bacteriologist are honorary gentlemen, rarely on duty, and who make occasional examinations and who, forsooth, do their work in a private office instead of a well equipped hospital laboratory. A well equipped hospital laboratory is absolutely necessary, without it a hospital may be a boarding house for the sick, but it does not make for progress. Every case entering a hospital must be most carefully studied, ante and post operation, ante and post mortem, and in the words of Murphy "Let the record show what was done". I consider a careful and complete record most important. This record must contain the clinical diagnosis, the operation findings, the pathological diagnosis, and a careful bed side record. Such records kept permanently in the hospital and subject to inspection would make for better and more honest work. In many hospitals there is absolutely no systematic attempt at improvement, the hospital board is either too soundly asleep or too actively engaged in intramural hostilities to think of the scientific side of hospital work. Nothing so effectually paralyzes a hospital as a somnolent hospital board, and such a board should resign. Sleeping sickness in a hospital board is incurable. In surgical work, too often it is cut and cover, the mistakes are not honest mistakes, such as complete painstaking men make, and which makes for progress. Too often hospitals are tainted with the same spirit of commercialism that is so often seen in medical ranks. Too often they are so anxious to fill their beds that they do not inquire into the character and efficiency of the doctor that would treat a patient in the house. No policy can be more short sighted. The reputation and the success of the hospital depends on the character of the work done, and only such physicians should be permitted to work within the walls of a hospital as are able to add to the reputation and standing of the hospital. I believe that there should be a junior and senior staff, the members of the junior staff to be under supervision until they have demonstrated their fitness to assume critical responsibility. Every legal, honest practitioner should be given the opportunity to dem-

onstrate his ability, but if after reasonable opportunity it becomes evident that he is morally and professionally unqualified, the senior staff should have the authority to deny him further admission to the hospital. I consider this all important. A man known to be dishonest, or of a judgment so warped that he does a gastro-colostomy as an operation of choice, or who does a hysterectomy on a young woman and proudly exhibits the "specimen," a submucous fibroid which in no manner necessitated a sacrifice of the uterus, or who commits a criminal act inside or outside of the hospital, should be forever barred. I am pleased to report that there are some hospitals in Iowa that bar men like the above. Would there were more!

The operating room should be open to members of the staff at all times. Of course, every attendant witnessing the operation of another is bound by the most rigid obligation to preserve professional secrecy, the same as if the patient were his own. In this way the limited number of operations in a small hospital could be seen by all, and the sum total of the experience of each member of the staff would be very considerable more than by other methods. On the one hand, camera obscura methods should not obtain in a hospital, on the other hand, professional secrecy must remain inviolate. Interesting cases of all kinds should be studied for the benefit of both patient and staff.

I believe further, that the day is past when medical men can be attending physicians and attending surgeons. They should be attending physicians or attending surgeons. So long as practitioners of medicine attempt to cover the entire field, so long will work be poorly done. No man can be a physician and a surgeon.

Let us get over the idea that the surgeon has the larger brain with deeper convolutions? It is true his successes and his failures are more in evidence, but the correct management of an anemic, illy nourished child, the correct management of a summer diarrhea, the correct management of a case of pneumonia is a task which even the best should feel proud to have done well, and the man that manages these cases well, that by training and nature is fitted to do them well, is not fitted to do surgery, and equally, the man that with a few movements of the knife is in the habit of accomplishing much, is not fitted for the patient persevering work of the internist, although he must be a good diagnostician. I believe that the movement to standardize all hospitals should be encouraged by every means possible. Minnesota has taken the lead, and a nation wide movement is being considered by the Council on Education of the American Medical Association. I believe that the hospitals of Iowa will welcome this movement. A hospital is a public utility, the public is vitally interested, and has a right to know that it is well managed. All hospitals should be placed under searching and rigid state or national supervision. Standard hospitals would be available

as clinical schools for the instruction of fifth year students. What an immense impetus to better endeavor. The public would soon recognize the difference between a standard hospital and one that is not standard, patients would seek the former and avoid the latter. Let us have well managed standardized hospitals, where team work is done, where specialists are developed, where only high grade men are admitted, and where the incompetent and dishonest are barred. Let hospitals become each a medical school where there are equal privileges for all honest, earnest, reasonably, competent men. But, I repeat it, to work in a hospital must be considered a privilege, a badge of honor, and unworthy should not enter. Who shall decide the question of fitness? If the work of a man will not bear the light of day, if his work is not open to inspection by his colleagues, if the record, an honest record, does not show what he has done, let him be barred.

I wish to make a plea for a trained resident Roentgenologist pathologist and anesthetist in hospitals. It is becoming quite the correct thing to have the anesthetic given by trained women. Such a woman, resident in the hospital, could give anesthetics, act as pathologist, do X-Ray work, etc. There is ample work about a hospital of every moderate size to keep such a trained woman quite busy, to the great advantage of every member of the staff. A pathological report in every case would stimulate to better effort and make for better doctors.

COMMERCIALISM.

This word commercialism has a harsh and rasping sound, but it will not down, although its discussion usually makes for progress, as the crab progresses. Books have been written on it (Norman Barnesbey, "Medical Chaos and Crime"); there have been biting magazine articles without number, (notably by Arno Dosch, Ex-President Reed of the A. M. A., both in Pearson's) many articles in medical bodies. The remedy for existing conditions has been sought in publicity; laws to control it have been threatened, dire laws, unless the medical profession eradicated the evil: "Purify yourself from within or you will be purified from without and to your sorrow." The result has been more and more commercialism, until the public thoroughly distrusts the medical profession, a distrust on which arrogant quackery has fattened as never before. What good does it do to talk about these things? But the subject will not down, until the medical profession mends its ways, and public confidence is restored. Too much has been said and written to "put on the lid" now. I shall not enumerate the various symptoms of this disease, commercialism, as manifested in the body professional. This is a commercial age, and it is little wonder that the medical profession has not escaped. In truth, to have entirely escaped infection, would

mean that medical men and women are made up of much sterner and purer stuff than other men and women. "Put money enough in thy purse" is the almost universal slogan.

In defense of commercialism in medicine, it has been said that medicine is a business, and business methods should prevail. A business man has something to sell, and he sells to all that he can induce to buy, his only concern being the ability of the would be purchaser to pay, and his own profit on the transaction. It is not for him to inquire whether the would-be purchaser needs the article offered, or whether its acquisition will add to his happiness or comfort. Imagine a physician or a surgeon influenced by the same considerations, "ability to pay and the profit on the transaction." How often have you, members of this society that are not tradesmen, how often have you refused to sell your commodity in spite of the fact that the consumer had a good financial rating, and the profits of the transaction were within your grasp; how often have you refused to do unnecessary operations; how often have you sought your reward not in "honesty is the best policy" but in the feeling that you were doing right, regardless of the most profitable policy. Now, we are not tradesmen, the practice of medicine is not a business except to the charlatan and the quack. What sort of business man would unceasingly labor to destroy his market and curtail his sales, as does the physician who tries to prevent disease and the spread of infection. But I fear that there may be physicians that are tradesmen, that barter, that sell their wares to all that are willing to buy, to whom a patient is only a possible source of so much profit, as much "as the tariff will bear." I do not believe that any such are attending members of this society. The relation between physician and patient is not that of buyer and seller, it is unique, unlike that of anything else on earth. As was recently said in an address to medical men "You are the prosecuting attorney, you are the counsel for the defense, you are the judge, you are the jury, and you are, sometimes, the executioner." And I shall add "You conduct your case behind closed doors, in camera obscura, with no witness but your own sense of right and wrong." And this profession of ours is a business, subject to business methods! I tell you it is a vocation calling for the highest ideals and for the most unselfish standards of honesty and purity of purpose. No, we are not tradesmen, you and I. But if it be true "that those that preach the Gospel shall live by the Gospel", it must be fitting that those who practice medicine should live by their labors. Business methods in making collections does not make our profession a business; and here a business spirit, a tempered business spirit, should prevail.

But the struggle for existence goes relentlessly on and the spirit of commercialism is the result of an inexorable law. As the struggle

for a livelihood becomes more intense, men are less concerned about methods, provided the desired end be obtained. No fact is better known in the business world than that competition may be so acute as to be ruinous to the competitor, and give a very inferior article to the consumer. Worse still, the material rewards may be so meager that the better class of young men will not be attracted by the profession. What can be done to remedy this evil? Before a remedy can be suggested for this condition something must be known of its source of the factors which brought it about and which give it root. Back of all and responsible for all is a condition from which there is no immediate escape. There are too many medical schools, too many commercial medical schools, and consequently too many doctors and especially too many that are graduates of commercial schools. The remedy that suggests itself first of all, is to lessen the number of medical schools, and to eliminate all of the commercial schools. There is no other possible solution. Yellow fever was throttled by destroying the breeding places of the mosquito; by screening the rain water, oiling the ponds, or draining the swamp land. In like manner must the breeding places of the incompetent doctors be sought out and made impossible. All the commercial medical schools must go, all the struggling medical schools must go, medical schools harboring commercial teachers must purge their faculties or forfeit the support of the profession. Commercial teachers in medical faculties are doing and have done more to commercialize the profession, and I use commercialize in the worst possible sense, than all other factors combined. With these men prostituting their position for the most selfish of ends, improvement is impossible. The struggling and honest school may deserve sympathy and the coup de grace should be given it as considerately as possible, but it must be coup de grace. If for any reason a school does not promise the best results, it must go. Let the good and the poor schools be advertised for just what they are, let prospective students know which schools are good and which are bad. Students must learn more about work in medical colleges. They must learn that it is an easy matter to keep them busy in almost any kind of a medical school, to keep them "hustling", that they have no time to compare notes. Naturally, the ambitious, industrious student feels that his time is profitably spent because he is busy. He is not a judge of the quality and food value of the viands set before him, he often gets very little wheat in much chaff, so that he is kept busy getting enough protein to keep growing, his stomach is taxed to the utmost, but the food value of the repast is very low, his real advance is but a fraction of what it should be in the four or five years of his course. If the best schools were selected, and this would be done if the best schools were known to those entering, much would be done to solve the problems now confronting us. Doctors should advise young men to select

only the better schools, should help them select the better schools.

The State Board of Medical Examiners, a National Board, or a Board for a group of states, must insist on more rigid examinations of schools and of applicants for license. It may be necessary to improve the quality of the Board. In fact I think it is most advisable to do this by asking the State Medical Society to suggest two or three names for each vacancy on the Board, the governor to make the final selection. There should be no bar to reappointment on the board, because really good men are very few. Boards must carefully acquaint themselves with the work actually done in medical schools. Let them carefully inspect the schools, actually know whether that old worthless gynecological clinic is still given, whether that "favorite pastime of former medical students" the omnibus spectacular surgical clinic, worthless except for diagnostic purposes, is still in vogue, or whether individual painstaking instruction is being given to small groups of students. Let the State Board know that clinical material is ample, that selected cases may be available for demonstration when needed. When the candidate reports that he has attended five cases of confinement, let the Board know whether the five cases sufficed for one hundred students seated on benches or whether each student individually attended five cases, let the board know whether one hour by the teacher means one hour for one hundred students taken collectively, or whether it means one hour for a small group of five students. The Board must take nothing for granted, let it actually investigate, and know that candidates have had serious individual, not omnibus training. Two years in college as an entrance requirement may mean something or it may be a blind, the actual work in the medical course is more important than the entrance requirements.

Let the Board give a practical as well as theoretical examination. The present examinations are not a test. A man may answer ten questions on almost any subject, with the aid of quizmasters or quiz manuals, and still utterly incompetent to practice medicine, woefully ignorant of medicine. It is a very poor school indeed that cannot prepare its graduates to pass examinations as at present conducted. It is said that years ago a certain medical school in the South, with a one year course, had more men in the army and navy than any other half dozen medical schools. The graduates were prepared to pass examinations. That school is now a four year school, but I question whether its recent graduates are better able to answer questions than were the graduates of years ago, although they are infinitely better prepared to practice medicine, infinitely better doctors. The work of the State Board will be very easy in those states which have no medical schools within their border. In such states both the theoretical and the practical examinations can be made very severe, the number of physicians gradually lessened, and the service

to the public immensely benefitted. Such a state would be especially fortunate, it should have the best medical service, other states bearing the heavy cost of educating its medical men. There would be no local interests to consider.

In states which have within their border weak and struggling medical schools, the profession has confronting it an unusually difficult problem, since the examinations are sure to be tempered to meet the ability of the home school. Deplorable indeed is the condition in a state in which there are many commercial schools of the lowest type and in which the State Board is controlled wholly or in part by these schools. This condition seems to exist in one great commonwealth, and it is a satisfaction to know that the Iowa State Board and other State Boards have established a quarantine against that state, and it was time. The odor was smelling to Heaven, and it will take a generation to remove the blight.

With fewer and better schools, better examinations, with at least one year of hospital training, there will be fewer and better doctors and the medical profession will attract better men. This much attained, professional fees must be equalized. Who will maintain that the correct management of a case of pneumonia, typhoid fever, or summer complaint in a child requires less skill and thought than an ordinary laparotomy. Is the fee adequate for the services in these cases? Fees for the trying house to house service, be it in the country or in the city, are too low. Do you wonder that so many medical men are attracted by the larger fees of the operator? The well trained experienced surgeon who makes careful diagnoses, who is competent to meet emergencies, who does every operation in the best possible manner, who is conscientious and God fearing, who declines to do unnecessary operations, who does enough but not too much, that man earns his fee whatever it may be; his fee is not easily earned, he is the ballet dancer that so easily and so gracefully stands on her great toes, it is easily done, at least, it seems easy, but try it. It took that girl years and years of patient effort to do that apparently simple trick well. She is the surgeon who so easily earns his fee. We are attracted by the things which seem easy, we neglect the things really difficult, as the correct diagnosis, and the correct management of daily internal cases. And why? It is the fee that is attractive. With fewer and better doctors, with fees proportionately to the skill and the judgment and the responsibility involved, conditions will be immensely improved. A doctor must be able to earn enough to educate his children, to take needed rest, to visit medical societies, and medical centers, to be able to look old age and possible infirmity in the face without dread or fear.

Can anything else be done to improve conditions? That question has been answered many times, it has been answered by Norman Barnesby, by Ex-President Reed of the American Medical As-

sociation, by President Murphy of the American Medical Association, and many others, and that remedy is included in the single word "publicity". Let the people know that at least twenty-five percent of the men practicing medicine are graduates of commercial schools, and entirely incompetent to assume responsibility of any kind, be it teething baby or a case of round worms. There are men that are equally incompetent, although graduates of schools considered good at the time of their graduation. I refer to the men who have not visited medical centers during the past ten or fifteen years, who do not read journals, whose diagnosis and operations beggar description.

The "amateur surgeon" has been flayed without mercy, and he deserves all he is getting, but he is not so much to blame as the school which failed to impress him with the sacredness of his obligations, and the state examining board which gave him his diploma and his license to assume every responsibility. In this address the word "amateur" considers the age of the surgeon, or the years of his practice. The man who does not often feel that his knowledge of surgery is very incomplete and who does not persistently seek the truth, the man who does not make every effort to reach a correct diagnosis in every case is an amateur, and should be so heralded to the public. The man who attempts the management of a difficult surgical case, and all laparotomies are difficult, without a reasonable experience as assistant, is dangerous, and should be so heralded to the public. The specialist who does not have a knowledge of medicine sufficiently broad to estimate symptoms with a fair degree of correctness and who uses a microscope of a power so high that he sees only a very limited field, is an amateur, and should be so heralded to the public. The man who does not use his microscope to make or confirm diagnoses whenever possible, is an amateur and will always remain an amateur surgeon. I have several young friends that do not subscribe for the Journal of the American Medical Association, and I am afraid they will always remain amateurs. The man who does not often think that his work is far from perfect, who is not a severe critic himself and of his methods, who considers himself as good as the best, is an amateur. I believe that the really competent and able men sometimes, often, experiences the feeling ascribed by Osler to the mystic in his "Alabama Student." "They see the travail of their souls and are not satisfied, and in the bitterness of the thought that they are not better than their fathers are ready with Elijah to lie down and die." Not a comforting sentiment but it comes with force to the men that are striving for better things; the amateur never has this feeling. Good internists are as scarce as good surgeons, they should command just as good fees, and internal cases are often more difficult, although a fatality does not rest as heavily on the shoulders of the internist, yet the responsibility is the

same. The man of any age who loses a case of pneumonia or typhoid without consultation, is just as reprehensible as the man who loses a patient in what should have been a simple and safe surgical operation.

The demand for better service is just as urgent in medicine as in surgery. I believe that the honest, conscientious, painstaking doctor will soon come into his own, be he internist or surgeon.

The remedy for commercialism is fewer and better medical schools, with the immediate and complete elimination of commercial teachers from all schools, a fifth hospital year, fewer and better doctors, less drugging and more teaching, equalizing of fees, and publicity. Let Arno Dosch, and Norman Barnesby, Lord, Murphy, Reed, and others continue their agitation until the public is taught to "stop, look, and listen." If the medical profession will not purify itself from within, let it be purified from without.

THE STATE EXAMINATIONS.

The medical profession has no quarrel with any real or so called school of medicine, it favors no special school but welcomes to its ranks every educated physician, and wishes a full measure of success to every man who practices the healing art. But the medical profession and this society stand for equal tests for all in the basic principles of medicine. No treatment according to any school is possible unless a diagnosis be made, without which the grossest and even criminal errors are unavoidable. On this point there can be no question. Hence the state examination must include all the subjects usually taught in a medical school, except therapeutics and materia medica, which may well be left to the schools. There should be no examination in "Practice" but a searching examination in "Internal and Nervous Diseases". The examination must include the causes, the pathology, and the symptoms of all internal diseases, and all the so called fundamental branches, all of them, that a diagnosis may be possible. It is no concern of the state board of medical examiners whether an applicant be a so called regular, homeopath, eclectic, or what not, so long as he is well trained in pathology, pathogenesis, etc. Clean, competent, honest, stimulating competition is welcomed. Let us hope that the time is not far distant when a National Board of Examiners will take charge of all examinations, and issue all licenses to practice medicine. Perhaps a Board representing a group of states would be more practical, as suggested by Mr. Hallet of the Royal College of Surgeons, at the recent conference in Chicago.

THE IOWA STATE BOARD OF HEALTH.

What can be said of this organization except that it is doing splendid work considering the funds at its disposal. Perhaps the well known story of the little mother and fat hog will bear repeti-

tion. It is by J. N. Hurty, Secretary of the Indiana State Board of Health. It was written for another state, but it fits Iowa.

"One time a little mother, who was only twenty-five years old, began to feel tired all the time. Her appetite had failed her for weeks before the tired feeling came. Her three little girls, once a joy in her life, now became a burden to her. It was "mamma", "mamma" all day long. She never had noticed these appeals until the tired feeling came. The little mother also had red spots on her cheeks and a slight dry cough. One day, when dragging herself around, forcing her weary body to work, she felt a sharp but slight pain in her chest, her head grew dizzy, and suddenly her mouth filled with blood. The hemorrhage was not severe, but it left her very weak. The doctor she had consulted for her cough and tired feeling said, "You are all run down; you need a tonic." For a fee he prescribed bitters made of alcohol, water, and gentian. This gave her false strength for a while, for it checked out her little reserve. When the hemorrhage occurred she and all her neighbors knew she had consumption and the doctor should have known it and told her months before.

Now she wrote to the State Board of Health and said "I am told that consumption in its early stages can be cured by outdoor life, continued rest, and plenty of plain, good food. I do not want to die. I want to live and raise my children to make them good citizens. Where can I go to get well? The reply was, "The great Christian State of Indiana has not yet risen to the mighty economy of saving the lives of little mothers from consumption. At present the only place where you can go is a grave. However, the State will care for your children in an orphans' asylum after you are dead, and then in a few years a special officer will find a home for them. But save your life—never". "That is a cranky idea," for a member on the floor of the sixty-fifth assembly said so. Besides, said he, "It isn't business; the State can't afford it." So the little mother died of the preventable and curable disease, the home was broken up, and the children were taken to the orphans' asylum.

A big fat hog one morning found he had a pain in his belly. He squealed loudly and the farmer came out of his house to see what was the matter. "He's got the hog cholera, said the hired man. So the farmer telegraphed to Secretary Wilson of the United States Agriculture Department (who said the other day he had 3,000 experts in animal and plant diseases), and the reply was—"Cert., I'll send you a man right away." Sure enough, the man came. He said he was a D. V. S. and he was too. He had a Government syringe and a bottle of Government medicine in his hand bag, and he went for the hog. It got well. It wasn't cranky for the Government to do this, and it could afford the expense, for the hog could be turned into ham, sausage, lard and bacon.

Anybody even a fool, can see it would be cranky for the State

to save the life of a little mother, and it could not afford it either.

Moral: Be a hog and be worth saving."

Ten times the amount of money at present available would not be too much to do the work clearly before it. Individually and collectively, the profession must make every effort to impress our law makers with the need of more generous appropriations for the Board.

THE PUBLIC AND THE PHYSICIAN.

I said that the public pretty thoroughly distrusts the physician and not without some reason. The loud and continuous hammering the profession is receiving because of its commercial tendencies, and because of the large percent of entirely incompetent men within its ranks in a measure explain this distrust. Only a few days ago one of the foremost scientists in the country said to me "What benefit can come from a consultation, doctors always support each other, the patient is no wiser, consultations are merely a matter of form." This statement was made by an educated observing man. Does it indicate that he has great confidence in the integrity of the profession? Is there any basis for his suspicions?

I often think that the number of quacks in a community is a measure of the manner in which the profession has met its obligations. I recently asked a well known practitioner whether he gave his patients sensible advice, whether he instructed them in medical matters. "Sensible advice, instruction, no. They want treatment, and I treat them." This sentiment put into practice is sure to work to the advantage of quacks and quackery. An intelligent community intelligent in medical matters, is not a good field for quacks. Every physician should become the teacher of his patients. The public must be educated, and doctors must be the teachers, at the bed side, in the consulting room, always telling the truth about medical matters. If every doctor would do something in this line, if only a little, the sum total would be a stunning blow for dishonest and illegal practitioners.

Says Benjamin Moore, in "The Dawn of the Health Age", along these same lines, "The Medical profession sadly requires to have some dignity put back into it, by being made a truly teaching profession. Medicine must be given sometimes, but at the same time if doctors could see their way to give one tenth the present amount of drugging and ten times the present amount of teaching, it would be better for both the world at large and the self respect of the medical profession." Less drugging and more teaching, is a slogan by which to conjure.

DR. WILEY AND THE OWEN BILL.

You all remember the unworthy effort to force this faithful public servant from his important position. Feeling that by so doing I should reflect the sentiment of this society, I sent a message to

President Taft "That the two thousand members of the Iowa State Medical Society has endorsed and believed in Dr. Wiley because of the great work he has done and is doing. A very courteous reply came from the White House but of course under the signature of the President's secretary. But Dr. Wiley has resigned. I have so much confidence in his judgment that I feel that he is working for better things, that he sees better and bigger things in the not far distant future, a National Bureau of Health. About this just a word. I need not dwell on the urgent need for such a Bureau, or on the work done by the League of Medical Freedom to prevent its organization, but who, says Earl Mayo, are the chief opponents of the establishment of a National Bureau of Health and who oppose all supervision in health and medical matters, state or national. "What other interest," says Mayo, in referring to the patent medicine interest, "has the ability, even if it had the disposition, to raise hundreds of thousands of dollars for a continuous campaign against the proposed National Bureau of Health, all in the guise of medical freedom." "Freedom", says Mayo, "to poison, to debauch, and to slay, and such opposition should bring to Senator Owen the support of every decent citizen." Much has already been done to voice the sentiment of the profession and of the people on these matters, but much remains to be done. A direct and forceful appeal must be made to the broad minded men that represent the state of Iowa at Washington. I should suggest not only that the House of Delegates send a suitable message to Senators Owen, Cummins and Kenyon, but that every member of this Society communicate with his respective representative in Washington, asking for early and favorable action on the Owen Bill, known as Calendar Bill 561. These letters must be written at once. In addition, every member should induce as many influential citizens as possible to write similar letters. The Owen Bill would become a law very soon if the members of the medical profession were half as busy as the League of Medical Freedom. We must not be caught napping, we are responsible for the attitude of Iowa in this matter and now is the time for action.

The Owen Bill has recently been reported favorably by the Senate Committee, not only is this reason for encouragement, but it is reason for additional effort. Everybody must get busy and boost. Write letters to the Iowa senators and representatives, write many letters, and at once.

A CRYING NEED AND AN OPPORTUNITY.

We owe much to Rochester and much to the leading surgeons of Chicago and other great cities. They have thought of us, and prepared us an annual Congress of surgeons, and other like entertainment. We can go to a large city at any time and see noted men at surgical work, always technic, until we forget everything else.

What we need most of all and what we want is not operations, not technic, but pathology and diagnosis, medicine and medical clinics. We need and we want careful clinical methods, we want diagnostic methods, we want to refresh and rejuvenate ourselves by again seeing and hearing Pepper, Charcot, Nothnagle, Gerhard, Bramwell, Gowers, Kraft-Ebing, and Dejerine. We must be brought to a higher estimation of things medical. We want to get acquainted with the internists and the neurologists, with Dock, Billings, Edwards and Sippy; with Patrick, Church, and Hecht. We want to see these giants in action, we want to observe and study their methods. These are the men that can stand on the bridge, that have it in their power to stay the surgical onslaught, and to entice younger men and older men to stay in medicine. Let Chicago arrange a medical clinic for senior students and doctors, three or four hours each week day, let the time and the place be widely heralded in different hospitals, on different days, let the keynote be diagnosis and clinical methods. These clinics would soon be as well known as are the surgical clinics, and they would soon become veritable medical meccas. A Surgical Congress makes for more surgeons, and I hope that it makes for better surgeons. But it is an omnibus, spectacular, opera glass affair. I sometimes fear that it fosters the idea that surgery is so easy, and so profitable, and I hope that it stimulates serious study of surgical problems, I hope that it makes for better diagnosticians, I hope that it makes for better surgical pathologists.

In addition to the daily clinics already mentioned, a Medical Congress conducted much as the Surgical Congress is conducted would stimulate the often waning spirits of the internists, and every general practitioner is an internist. Such a Congress would divide honors with the Surgical Congress, or perhaps rank higher as a factor making for progress, and do more good. I would not have this an idle appeal, many many times have I longed for medical clinics. There are more than enough internists in Chicago and St. Louis to accomplish wonders in this direction without undue hardship to anyone.

The surgeons are doing all the shouting, while the internist bewails the lack of appreciation for his work. This is not as it should be, and the remedy is easy. We need diagnostic methods, we must improve ourselves, we must again be taught how to examine patients, how to read and to correctly estimate. These must be clinics that set men thinking, that inspire correct methods, the benefits will be immense. Will our appeal be heard by the men that have it in their power to teach us better methods and higher ideals? I hope so. We appeal to the Chicago and St. Louis internists to inaugurate a series of medical clinics and a Medical Congress. They will be successful. Many of you know how attractive the clinics of Nothnagle, Charcot, Mendel, Kraft Ebing, and others were to medical men.

Chicago and St. Louis can duplicate these clinics. Will they heed the call?

THE MEN OF THE HOUR.

In closing, I should say that the need and the hope of the profession is young men, earnest, well trained young men, men of high ideals, but in this work of ours there is but one test for age. The man that reads, the man that studies, the man that does not let a day pass without an effort to make himself a better doctor, the man that attends his county and state societies, the man that frequently visits medical centers, the man that prepares papers for his county and other societies, is a young man, and in him lies the hope of the profession. The man that isolates himself from his co-workers, that works alone, that feels that attendance at medical meetings is time wasted, and that nothing is to be learned at medical centers, is an old man regardless of the date of his birth. The man that is ready to write a paper when invited to do so is a young man. Recently I spent a day with one of the leading surgeons of our sister state to the eastward. Casually, he said that he had in mind twelve subjects on which he wished to read papers. His papers are much sought and always good. That man will never grow old, and what an example he should be to some of our old men that graduated during the first ten years of the present century, that are too busy to prepare papers, or that do not regard an invitation to read a paper as a precious compliment, calling for their best effort. I know a large number of men that began to age the day they graduated, that have grown older and older ever since, that are now bent and decrepit in medicine, although they have not yet reached the age of forty years. I know many men of sixty-five or seventy years, that are active workers, with most receptive minds, and these men are still young, and I love them for their youth. The need of the hour is men that love medicine for its own sake, that are enthusiastic tireless students, clean men, honest men, men that are brave enough to say "I do not understand your case", men that strive to make a diagnosis rather than blindly prescribe, men that are painstaking, progressive, receptive, sympathetic, big hearted, warm blooded men, God fearing men. I love God fearing men, men that never forget that all their training, all their effort has for its object only the best interests of the patient to which every other consideration is secondary. These are the young men so sorely needed, they will never grow old; and "men" all through this paper includes men and women. The grandest young man in Iowa today, we all love him, is Edward Hornibrook, of Cherokee.

I wish to say that I believe that there are hundreds and hundreds of men practicing in Iowa, the larger percent of them are country doctors, that in a progressive spirit and in devotion to duty

excell their city confreres. There are in Iowa today hundreds and hundreds of county doctors who are fully competent, and who merit the sympathy and warm affection so freely given to that "good old country doctor."

My faith in the future of the profession is unbounded, the future is bright with promise. We shall weather all our storms, commercialism will disappear, the public will be more intelligent and responsive, hospitals will bar their doors to the unworthy, the commercial schools will be throttled, and the material rewards will be sufficient to attract the very best men. The profession will continue worthy of its great inheritance, of the inheritance left it by Lister, McDowell, Laennec, Jenner, Hunter, Harvey, Koch, Pasteur, and Ross, a few of the immortals that grace our guild. It will be a better and a purer profession, a fit profession for your son and for mine.

ADDRESS ON SURGERY

IOWA STATE MEDICAL SOCIETY—SIXTY-FIRST SESSION—BURLINGTON, MAY, 8, 9, 10, 1912.

OBSERVATIONS ON THE DIAGNOSIS AND TREATMENT OF FRACTURES.

S. C. PLUMMER, M. D., Chicago, Illinois.

Our forefathers were expert in the handling of fractures. They studied carefully their mechanism, the anatomy of the structures involved, the influence of the muscles in causing and maintaining displacement of the fragments, their diagnosis and their treatment. The treatment of fractures constituted a large proportion of the surgeon's practice. His ability as a surgeon was largely judged by his success in their treatment. Many ingenious splints and many efficient apparatus were devised. The surgeon prided himself on his ability to apply a bandage not only skillfully, but neatly

What of the present? The surgeon of today can perform many operations upon the cavities of the body which surpass our forefathers' dreams of accomplishment, but in the management of simple fractures of the long bones has he advanced beyond our forefathers? I would even put the question more forcibly: is the the average practitioner who handles fractures today the equal of the average practitioner of the generation which has gone? I am inclined to answer these questions in the negative.

If it be true that the improvement in the treatment of fractures has not kept pace with the general advance in surgical treatment, how is this to be accounted for?

We have the aid of asepsis and the X-Ray, two valuable adjuncts unknown to our predecessors, but aside from the great im-

provement in the results in compound fractures wrought by asepsis, these two aids have not been used to the full extent of their possibilities.

I account for this state of affairs by a comparative lack of interest in fractures on the part of teachers and students. Fractures have been treated for ages; most of the points in their diagnosis and the essential principles of treatment have long been settled. The consideration of fractures, then, lacks the attraction of novelty. The teacher has been pushing out into the new fields of abdominal, thoracic and cranial surgery, and the student has followed him. There is nothing spectacular in the ordinary treatment of fractures, and the student is likely to belittle the fracture clinic as compared with operative clinic. Yet the majority of students will become general practitioners, and, as such, will be intrusted with the treatment of fractures more frequently than with abdominal operations.

A change in the attitude of surgeons toward the subject of fractures is at hand. As evidences of this I call your attention to the fact that the address of the President⁶ of the American Surgical Association for the year 1911 was upon this subject; one session of the Third International Congress of Surgery, held at Brussels in 1911, was devoted to fractures; a large proportion of the clinical teaching of the President of the American Medical Association is devoted to fractures; papers on fractures are being published from the large clinics both in this country and in Europe.

I make a plea, then, for your renewed interest in the subject of fractures.

DIAGNOSIS.

In the matter of diagnosis, the X-Ray has been the most valuable acquisition of recent years. Before its introduction the nearest approach to an accurate diagnosis was afforded by an examination under a general anesthetic. This is a method that is by no means to be dispensed with, but in many cases the use of the X-Ray makes resort to anesthesia unnecessary, and also gives more accurate information. In cases where the swelling is great or the limb very fat or muscular, an accurate diagnosis is often impossible, even with general anesthesia.

The X-Ray has taught us that fractures are much more frequently comminuted than we formerly believed, and in many cases a manipulative examination reveals only the main line of fracture. Fractures of certain bones, such as those of the carpus or tarsus, formerly thought to be curiosities, are now known to be rather frequent occurrence. Many impacted fractures and linear fractures without separation of the fragments are now discovered. These fractures may lack most of the diagnostic signs by which we ordinarily recognize fracture, such as deformity, crepitus and a false

point of motion, but one sign is almost invariably present, and that is a localized point of extreme tenderness to pressure upon the bone at the site of fracture. Where this sign is elicited it is strong presumptive evidence of the existence of a fracture.

It takes but a limited experience in the study of skiagrams to teach the observer that these are frequently deceptive. One must never forget that the skiagram shows a shadow of the bone, not a photograph of it; and it is a matter of common knowledge that a shadow is often very unlike the object which casts it. The distance of the bone from the plate and the position of the tube in relation to the fracture must be taken into account. Often an exposure taken from one aspect of a limb may fail to show a fracture, or show one with a minimum of displacement, while a second exposure at right angles to the first may show a fracture with great displacement. It is, consequently, an imperative rule to have two skiagrams of each fracture, these being, as nearly as may be, at right angles to each other.

Wherever possible, the opinion of an expert skiagrapher should be obtained as to the interpretation of the skiagram.

The X-Ray has not fulfilled its usefulness when it has assisted us in diagnosis, but is invaluable as a test of the efficiency of our efforts at reduction and retention. Sometimes satisfactory reduction is impossible by the non-operative method; and sometimes, when reduction is satisfactory, retention in good apposition is impossible. The X-Ray will reveal this and should be used after the retentive dressing has been applied in all cases where practicable.

The employment of the X-Ray, as just outlined, is desirable in every case, and, where practicable, should invariably be resorted to. We, of course, admit that the exigencies of many cases make it impossible to attain this ideal.

TREATMENT.

In the treatment of fractures we aim first to secure a good functional result, and, second, to get a restoration of the parts as nearly to the anatomical as possible, as a rule, the nearer the exact anatomical reposition we obtain, the better the functional result. The X-Ray taught us, better than anything that had preceded it, how far short we fall of obtaining the best results, and, as a consequence, a revival of interest in the treatment of fractures was inevitable.

To Mr. W. Arbuthnot Lane we owe much for taking advanced ground in the treatment of fractures by the open method. Lane not only improved the technic so as to lessen the danger of sepsis in open operations, but also improved the methods of fixation so as to make good results more certain.

As the most notable advances in the management of fractures during the last decade have to do with the open treatment, this pa-

per will deal largely with this phase of the subject. I beg of you, however, not to put me down as an advocate of the open treatment as a routine, for I believe this treatment should be reserved for the cases where good functional results cannot otherwise be obtained. I believe that in the hands of the average surgeon the open treatment is not without danger, however it may be in the hands of specially trained and greatly experienced operators, such as Lane and Lambotte. The tone of the recent articles by American surgeons, while advocating the open treatment in certain cases, is distinctly conservative.

First, let us consider briefly some recent improvements in the non-operative method of treatment.

EXTENSION.

Extension by means of the weight and pulley attached to the limb by adhesive plaster has for many years been of universal application where extension was to be employed in connection with retentive dressings, and is, in the main, efficient. Aside from this, certain fractures were the only means of extension used. In some cases the adhesive plaster could not be applied, owing to a condition of the skin which made it intolerable, to complicating wounds or to the location of the fracture so near the end of the limb that there was not surface enough below the fracture to make the plaster secure. In such cases Codivilla, of Bologna, recommended "nail extension," and this has been used and advocated by Steinmann, of Bern, and Anschutz, ¹ of Kiel. "By this method the weight is attached directly to the distal fragment by means of a nail which is driven through the bone." (Anschutz.) By means of cords attached to the ends of the nail the weight is allowed to hang over a pulley. "One may drive a nail into the bone on either side, or drive one nail entirely through the bone and soft parts."

Anschutz says that the method is not painful, and while he admits some danger of infection, he says that this is slight, and, in order to minimize it, does not employ the nail until the direct results of traumatism have subsided. He also mentions the possibility of interference with the function of a joint by the nail's proximity to it.

As an aid to the reduction of fractures without open operation, more efficient means of extension have been devised in recent years. Manual extension is often insufficient; moreover, it cannot be steadily maintained, owing to fatigue on the part of the assistant making the extension.

When Professor Lorenz visited this country a few years ago and demonstrated his method of reducing congenital dislocation of the hip, he had his assistant apply a skein of yarn to the patient's limb, by means of which extension was made. This was more efficient than gripping the limb with the hands, but left much to be

desired. A layman from Boston, a lawyer named Bartlett, invented an extension apparatus to facilitate this reduction. This apparatus consists essentially of a steel rod, one end of which works in a socket fastened upon the end of the operating table, the other end carrying a foot-piece which is attached to the foot by means of a leather strap. Extension is made by a ratchet by means of which the foot-piece may be moved upon the rod. Modifications of this apparatus have been used by orthopedic surgeons in the adjustment of fractures of the femur, as a plaster cast can be applied from the ankle up to the waist while the traction is being exerted. This apparatus is also useful in the open treatment of fracture of the neck of the femur, which will be alluded to later.

The use of the weight and pulley is also helpful in the reduction of fractures without operation, as well as where the open method is used. Much greater weight is used than in the ordinary extension dressing, Martin ¹³ having used even two hundred pounds in fracture of the femur. In non-operative cases the extension may be applied to the limb by a strong canvas strip tied in a clove-hitch. In the case of the femur the clove-stitch is applied just above the tuberosities, care being taken not to have the pull come upon the popliteal space for fear of injurious pressure on the vessels and nerves. In case of the humerus, the canvas band is applied around the forearm close to the elbow, without a knot, the forearm being held by a narrow sling at right angles to the arm. Magnuson ¹¹ has devised a convenient apparatus for applying extension in this manner.

Gibbon ⁵ advises the continuous use of extension by means of adhesive strips and the weight and pulley as a means of reducing obstinate cases of fracture of the humerus or bones of the forearm. This continuous traction may be kept up for a period of from two to ten days.

Sometimes, owing to great swelling and to blisters and abrasions, a simple fracture cannot be properly reduced and dressed for some days after the injury. During this time the fragments may have become so fixed that they are with difficulty released from the faulty position they have assumed. In such cases a piece of hard wood in the shape of a triangular prism, one of its angles being padded and covered with leather, may with advantage be used as a fulcrum over which the fragments are powerfully manipulated by the hands of the surgeon, until thoroughly loosened. These wooden blocks are frequently used in orthopedic clinics.

I wish in passing to mention two fractures whose treatment has been improved in recent years without open operation. The first is fracture of the neck of the femur.

NON-OPERATIVE TREATMENT OF FRACTURE OF THE NECK OF THE FEMUR.

As you all know, for many years there was violent discussion

in the profession as to whether bony union could take place in an intracapsular fracture. Non-union or fibrous union so frequently resulted in these cases that the prognosis was unsatisfactory in the extreme.

It is to the honor of the profession of the State of Iowa that a practitioner of this State, a member of your Society, the late Dr. T. J. Maxwell, of Keokuk, devised a treatment for this fracture which gives satisfactory results in a large proportion of cases. During Dr. Maxwell's life this method of treatment failed to gain the recognition which it deserved, but, thanks to the energy of Dr. Ruth in promulgating it, it is now favorably known and extensively used by many surgeons of large experience.

Whitman's ¹⁵ method of fixing the limb in abduction by a plaster bandage is said to give good results in suitable cases. As part of the fixation of the fragments in the method of treatment is brought about by the application of the great trochanter to the side of the pelvis, this method is not applicable to cases complicated by a fracture through the trochanter.

FRACTURES THROUGH THE ARCH OF THE FOOT.

Another fracture in which improved treatment has been applied in recent years is that involving the arch of the foot, passing either through the tarsus or metatarsus. Great functional disability results in these cases, if a condition of flat-foot is allowed to ensue, and this is inevitable in fractures with much displacement, unless much care is used in adjusting the fragments so as to restore the normal arch. In these cases it is well to wait for the subsidence of the swelling, then to thoroughly loosen up the fragments in the manner mentioned above, this, of course, necessitating general anesthesia; after which the fragments are pushed into normal position and the foot fixed in a plaster-of-Paris dressing in the position of supination, that is, the foot is in a position of over-correction opposite to the position of flat-foot. Although the foot may appear slightly deformed, it will give somewhat when the patient walks and approximate a normal position. Even if a slight degree of varus persists, the patient is much better off than he would be with flat-foot, as he will not suffer the pain and early fatigue so common with the latter condition.

OPEN TREATMENT.

The open treatment of fractures is much more common of recent years than formerly, and furnishes an alluring field for surgical endeavor. We must bear in mind, however, that the open treatment involves a surgical operation, which is never without its dangers, and an operation is never to be resorted to when an equally good functional result can be secured without it.

The advantages of the operative treatment of simple fractures are stated by Mr. Lane ⁹ as follows:

“(a) It at once relieves the patient from the pain of any movement of the fragments upon one another.

“(b) It frees him from the tension and discomfort due to the extensive extravasation of blood between and into the tissues.

“(c) It shortens the duration of the period during which he is incapacitated from work, since union is practically by first intention, and, consequently, very rapid and perfect.

“(d) Lastly, and by far the most important, they leave his skeletal mechanics in the condition in which they were before he sustained the injury.”

I cannot agree with Mr. Lane in all of these contentions.

As to the relief of pain, this is not peculiar to the operative method, as we have all seen relief as soon as an adequate fixation dressing was applied.

As to the rapidity of union, Hessert ⁷ says: “It has been my experience to see union delayed weeks, even months, and I have never had a case of infection.” I have heard Murphy express the opinion that union was slower when a Lane plate had been applied, and this has also been my experience in some of my cases.

The greatest advantage, and one that cannot be disputed, is the last one, mentioned by Lane, namely, that of restoring the bone to its normal anatomical form.

INDICATIONS FOR OPEN TREATMENT.

As to the indications for open operation, there is a wide range of opinion.

Lane ⁹ says: “I make it my habit to operate on all cases of simple fracture of the long bones in which I am unable to restore the fragments to their normal relationship, and in which it is important to the individual that his mechanics should not be impaired by the injury.”

In another place ¹⁰ he states it a little differently: “I operate on all simple fractures in which I am unable to bring the fragments into satisfactory apposition, when the circumstances of the patient require it.”

This leaves us somewhat at sea as to just what cases Lane operates on, as it is a matter of individual judgment as to what constitutes satisfactory apposition. If by “normal relationship of the fragments” he means perfect anatomical restoration, he must operate upon practically every case of simple fracture. However, as we know that many cases of apposition give satisfactory results, even though the apposition is not anatomically perfect, it is safe to say that Lane treats many cases without open operation. Certainly, his statements above do not justify the assumption, frequently heard, that he operates on every case of simple fracture.

American surgeons are much more conservative and reserve the open operation for those cases in which reduction, accurate enough to insure a good functional result, either cannot be obtained, or, having been obtained, cannot be maintained by dressings.

In doubtful cases reduction should be made under anesthesia, retentive dressings applied and a skiagram taken. If, then, the apposition is not accurate enough to insure a good functional result, the open operation should be resorted to, if all conditions for operation are satisfactory.

IMPORTANCE OF STRICT ASEPSIS.

On one point there is absolute unanimity of opinion of all operators and writers, and that is upon the importance of the strictest asepsis. No simple fracture should be converted into an open fracture unless all the conditions are perfect for carrying out a perfect aseptic technic. All are agreed that in this class of bone surgery more than in any other type of operation, asepsis is necessary for success. The peritoneum, we know, can overcome the effects of a certain amount of septic contamination; not so with the bone. While some observations have been made that a slight degree of sepsis seemed to hasten union, all agree that the one chief and overwhelming cause of failure in these operations is sepsis.

Mr. Lane has evolved a special technic for operating aseptically in these cases. Special long and powerful instruments have been devised, the skin of the patient is covered up to the wound margins, and the operation is completed without introducing the fingers into the wound. To operate thus requires special skill, but those of us who are not expert enough to carry out Lane's technic in full in all cases should aim to approach it as nearly as possible.

FIXATION IN COMPOUND FRACTURES.

American surgeons are inclined to employ the Lane plate, or other device, for fixing the fragments, in compound fractures. Perfect asepsis can, of course, not always be obtained in these cases, and it will frequently be necessary later to remove any foreign body which can be better than when the fragments are not treated by direct fixation, and aseptic results are frequently obtained, even in these cases.

TIME FOR OPERATION.

As to the length of time after the receipt of the injury to wait before operating, there is a difference of opinion, some advocating immediate operation and others preferring to wait until the immediate effects of the trauma have subsided. I believe it safer to wait from seven to ten days, since the tissues are certainly better able to resist sepsis when the circulation has been somewhat restored, and asepsis is the all-important requisite for success.

INCISION.

In performing the open operation the incision is so placed as to reach the bone where it is most accessible, splitting the muscles instead of dividing them, as far as this is possible, and saving the important vessels and nerves.

EXTENSION IN OPEN OPERATION.

In effecting reduction and assisting in holding the fragments in apposition while fixation is accomplished, some of the methods of extension mentioned above in connection will be found of great value.

Martin ¹³ uses a sterile strip of strong canvas, a loop of which is passed over the upper end of the lower fragment, the free ends of the canvas strip being fastened to a rope which passes over a pulley. Weights of from fifty even up to two hundred pounds are used for from three to ten minutes.

Bartlett ³ of St. Louis, uses "a lace-shoe large enough to permit of free dorsal padding, after a screw-eye has been driven through the mid-line just in front of the heel and anchored to a thin steel plate similar to an insole."

REDUCTION IN OPEN OPERATION.

Bringing the freed ends of the fragments out of the wound at an angle to each other often facilitates reduction. Blake ⁴ uses Lambotte's clamps to hold the fragments and bring them out of the wound, and says that, by so doing, he no longer has to use traction for reduction.

In making the reduction one can frequently find certain projections on one fragment which fit into indentations on the other fragment. Sometimes these will hold so accurately that after reduction no special fixation is necessary. If corresponding parts are thus fitted, we are assured that there is no abdominal rotation in the shaft of the bone. This rotation of the fragments is of great importance in fractures of the forearm, and is in some cases most difficult to overcome without an operation, and failure to overcome it may result in great disability from limitation of pronation and supination. Ability to correct abnormal rotation is one of the advantages of the open operation.

FIXATION.

For fixation there may be used wire, nails, pegs, screws, or plates. The classical wire suture, so much used until recent years, has now been largely superseded by other appliances mentioned, and Lambotte says it should disappear from practice. In a number of cases where union has failed after the use of wire, it has been obtained by the use of the Lane plate.

In some fractures the use of chromic catgut or of kangaroo tendon is sufficient. This is especially applicable to fracture of the patella, where good results are obtained if the rents in the capsular ligament and aponeurosis at the side of the fractured bone are repaired and the torn periosteal-aponeurotic tissues on the surface of the bone are united.

Metal is mostly used for nails, pegs and screws, but ivory is also sometimes employed. Steel seems to be the best material for plates. The screws used to hold the plates should be threaded up close to the head, in order to give them sufficient hold in the bone, and, as a rule, are expected to reach only through the compact tissue of the surface of the bone next to the plate.

A hole must be drilled large enough to permit of driving in the screw with a screw driver, but not so large that the screw will not take a firm hold. Before this is done the plate must be held firmly in contact with the bone in the place it is expected to remain. Lambotte fastens one end of the plate to one fragment before making reduction; then brings the other fragment into place and fastens the other end of the plate to it. Most operators, however, apply the plate after the fragments have been reduced. Special clamps must be used to hold the plate and the fragments steady while the screws are put in. Several of these clamps have been devised, the most recent one by Bartlett.²

The question as to whether to apply the plate immediately to the bone or outside the periosteum is still unsettled and, as far as I know, does not affect the result. It is intended that the plate shall remain permanently, but if sepsis ensues, its removal is generally necessary. Sometimes a plate has to be removed even months after its application, even when the wound has apparently healed aseptically. In these cases it will generally be discovered that a slight sepsis is present. Lane, with his splendid technic, seldom finds it necessary to remove a plate; many other operators find it necessary to remove a large proportion of the plates.

In fractures of the neck of the humerus high up where the fragments cannot be properly adjusted, or in ununited fractures of the neck of the femur, nails or screws should be used. In order to prevent rotation of the upper fragment, two nails, or screws, should be employed in each case.

In the case of the femoral neck, if the extension apparatus, which the orthopedists use in reducing congenital dislocations of the hip, is employed, the great trochanter may be exposed by incision and the screws, or nails, inserted. Murphy exposes the femoral neck by temporary resection of the upper part of the great trochanter, so that the reduction can be observed and the nails properly placed.

Murphy ¹⁴ has replaced a head of the humerus, which had been entirely detached, and even removed and laid on the table, fixed it in position by nails and has proved by the skiagram that the head had fully regenerated.

UNUNITED FRACTURES.

Open operation is indicated in ununited fractures, and in these cases the plates will be found superior to the older method of wiring.

Murphy ¹⁴ says the best treatment of ununited fracture, where the X-Ray shows no osteogenetic effort to span the gap with new bone, is the transplantation of the crest of the tibia from the same patient into the medulla, so as to span across the line of fracture.

CLOSURE OF WOUND.

The wound is closed without drainage, as drainage leaves an avenue for infection, the complication to be avoided above all others.

The best retentive dressing, as a rule, is plaster-of-Paris, applied either as a cast or in the form of moulded splints. If the wound heals aseptically, there will be no need of changing the dressing for several weeks. If there are signs of infection, the dressing must be changed. If a cast has been applied, a window may be cut in it over the wound, through which the dressing may be changed.

MASSAGE.

I am a strong advocate of early massage in fractures. If moulded or other splints are used, one splint may be removed very early and enough of the limb laid bare to permit of some massage, while the other splint remains in place. If a cast is used, this should be temporarily removed, as soon as there is enough union to hold the fragments in place, and massage cautiously administered.

Massage is also of benefit before operation, in the interval between the receipt of the injury and the time of operation.

CONCLUSIONS.

In conclusion, I would emphasize that there is no controversy at the present time as to whether operative or non-operative treatment should be the rule or practice in the handling of fractures.

Rather, each case should be considered on its individual merits.

Fractures should receive more careful consideration than in the immediate past.

Non-operative measures should be exhausted before resorting to open operation.

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THE RELATION OF THE HOSPITAL TO MEDICAL EDUCATION AND TO THE COMMUNITY.*

O. J. FAY, M. D., Des Moines, Iowa.

“The welfare of the community is vitally concerned with the supply of well-trained nurses and physicians. Today, more than ever before, is this true, since the power to relieve suffering and to check the incalculable loss to society from preventable disease, whether reckoned in units of human lives or merely in units of dollars, is constantly growing. The modern hospital is absolutely essential to the development of efficient doctors and nurses and the Iowa Methodist Hospital is well fitted to fulfill the high calling of such a modern institution.

“The surgical operating rooms have entire new apparatus and are modern in every way. The maternity department is equipped with all the latest appliances. The diet kitchen and laboratory are fitted both for service and for instruction. In the X-Ray department the best apparatus that money can buy has been installed. The orthopedic and mechanico-therapeutic institute is now being established and will fill a long felt need in this city and in the state. The hydro-therapy department has been thoroughly and completely equipped at great expense. The clinical and pathological laboratories are well fitted for purposes of accurate diagnosis. Physicians as well as the public should welcome the establishment of such laboratories in this hospital because of the new impulse which they are giving to medical research. The possibilities of such work are far-reaching and must not be underestimated, for it is to them that we may reasonably look for a deeper insight into the causes and nature of the many diseases with which we are not now familiar.

“You who have borne the heavy burden of the development of this grand institution may well be pardoned a feeling of exultation and of pride. To the members of the Board of Trustees, to the contributors to the funds of this great institution, and to the Methodist Episcopal church in particular, I, in behalf of the staff, return thanks for this splendid new hospital. Let it be dedicated to humanity and to science, not to public vanity nor to private gain.

“This hospital, then, includes among its legitimate functions not only the care of the poor sick, but the training of physicians and nurses and the advancement of medical knowledge as well. From the class of 1912 of the medical department of Drake University, five graduates have been chosen to serve as internes for one year. These young men will come into close contact with the practical methods of caring for the sick and will thus round out their medical

*Address at dedication of New Wing of Iowa Methodist Hospital, Des Moines, April 28, 1912.

education. They are given a preparation and experience which is invaluable in their chosen work and as they go out into other communities they take with them and extend the influence of this great institution.

“But what can we do for the graduate of medicine who does not have the advantage of an internship? This brings us to a question concerning which the greatest misapprehension exists—the question of the introduction of students into the hospital wards during the last years of their medical course. The primary purpose of the hospital is, of course, the care and treatment of the sick and the first duty of its trustees and physicians is to safeguard the patients in every way. Nothing which does not make for their welfare can for a moment be tolerated. It has been feared that harm will be done the patients by permitting the students to examine them, but this objection is entirely unfounded. Anyone who is acquainted with the existing conditions knows that the clinical teachers and attending doctors of this Hospital are anxious for every thing that makes for the comfort of their patients and conduces to their recovery—equally so whether that patient be rich or poor. One of the aims of the clinical training of students in the hospital is the inculcating of just this spirit of anxious solicitude for the welfare of the patient. I can assure you that the students are always over-cautious in their anxiety to refrain from any disturbance of the patient and that any directions which may be given them by the attending physician are always most carefully carried out. One of our greatest medical teachers, after forty years’ experience in hospital wards, says that he has never known a single patient injured or his chances of recovery lessened by such teaching.

“Nor are the students themselves the only beneficiaries—this training of nurses, physicians, and students is a distinct advantage to the hospital as well. A teaching hospital is more influential, more widely useful, and more productive of medical knowledge than is a hospital which does not do such work. The more modern the equipment of a hospital, the more modern its methods of coping with disease, the more successful will it be in attracting good doctors and in serving an ever-increasing number of patients. Dr. W. W. Keen says: ‘Moreover, trustees may overlook one important advantage of a teaching hospital. Who will be less slovenly and careless in his duties, he who prescribes in the solitude of the sick chamber and operates with two or three assistants only, or he whose every movement is eagerly watched by hundreds of eyes, alert to detect every false step, the omission of an important chemical laboratory investigation, the neglect of careful examination of the back as well as the front of the chest, the failure to detect any important physical sign or symptom? Who will be more certain to keep up with the progress of medical science, he who works alone with no one to discover his

ignorance, or he who is surrounded by a lot of bright young fellows who have read the last *Lancet* or the newest *Annals of Surgery*? I cannot afford to have the youngsters familiar with operations, means of investigation, or newer methods of treatment of which I am ignorant; I must perforce study, read, catalogue, and remember or give place to others who will. Students are the best whip and spur I know.'

"I have but one more thought to leave with you and that also is a thought from one of America's great men: 'If the public wants good doctors it must help to make them.' "

SOME PRACTICAL POINTS IN X-RAY DIAGNOSIS AND THERAPEUTICS.*

G. S. BROWNING, M. D., Sioux City, Iowa.

At the outset let me disavow any claims of being an expert Roentgenologist or electrotherapeutic specialist. My position is that of a general practitioner, who has been especially interested in and has perhaps devoted more study to the subject of X-Rays and electrotherapy than has been the case with the average physician. I therefore present my apologies, if indeed apology is needed, in presuming to offer for your consideration a dissertation upon the titular heading of my paper, knowing full well that there are members of this society who so far outrank me as to experience in and knowledge of this subject that I hesitate to present any suggestions from my own limited scope; but then on second thought I am convinced that the majority of the general practitioners here present have not given these subjects so much thought and study as I, and so I may be privileged to speak to these as one having authority. But in emphasis I wish to say that I merely desire to bring to the attention of the general practitioner some points with which he should be cognizant as to the utilities of these remarkable forces of diagnosis and therapy and of which he should take advantage in his practice.

By reason of improvement in apparatus and technique in later years the X-Ray has become an agent of greater precision to administer and the dosage may now be measured almost as accurately as an official drug preparation, whereas formerly its administration was mostly by guess, as we usually read or heard of the application simply of so many minutes, without reference to the strength of current, distance of the tube, character of its vacuum, or any other of the various factors that enter into the proper dosage and administration of the rays. So to begin with the veriest rudiments, I will suggest that it is necessary to have an efficient apparatus and

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this must be considered from different therapeutic standpoints. In earlier years the static machine was more commonly utilized for the production of the X-Ray, and it may still be considered by some as efficient or even superior in some therapeutic work and for light skiagraphy and fluoroscopy but as a general rule an efficient coil is to be preferred. The essentials for a satisfactory coil are that it must develop sufficient current which can be easily controlled and measured over a large range of strength. The simplest is the best which may consist merely of a powerful direct current coil and electrolytic interrupter and milliamperemeter for measuring the current passing through the tube. The tube should be of the vacuum-regulating variety and of the proper degree of penetration for the work in hand.

In a brief summary I will give the technique of skiagraphy in general as I have adopted it. First it is necessary in making a radiogram to remove the clothing in order that pins, buttons, hooks or other objects may not appear upon the plate and distort the image. The tube should then be placed at the proper distance from the plate which for the ordinary tube is about 20 inches, as at that distance the shadow of an object assumes approximately the size of the object itself without magnification. But it is necessary to take into consideration exactly what part or object is desired to be brought out. If something near the upper surface of the body then the tube should be elevated so much farther than 20 inches and vice versa. Next determine the penetration of the tube to be sure that it is sufficient to go through the part to be exposed. It is the best to have a little too high penetration to start with because the vacuum and consequent penetration lowers by heating during the passage of a heavy current. The current is controlled by the rheostat and the exposure of the platinum point in the electrolyte of the interrupter. It is then essential to be familiar with the nature of the photographic plate being used as these vary so greatly in speed or the time of exposure required. A lead shield enclosing the tube and possibly a compression shield is of value both as a protection to the operator and to cut off the more angular rays from the tube thus sharpening to a certain degree the outline of the image on the plate. Now as to the time of exposure which is the most important factor in the production of a satisfactory radiogram. The time depends upon all the other factors combined. A tube of low penetration will require a longer exposure; the greater the current the less time is required and the greater the distance of the tube from the plate the longer the exposure. The time given must also take into consideration what part is desired to be brought out, whether the bone or soft parts as in radiograms of the chest. The exposure will further depend upon the character of the plate used and the method of development of the same.

The mere mention of these various factors without a discussion of the details is sufficient to show that skiagraphy is not a haphazard, easily acquired, anybody-can-do-it sort of process, but is an art requiring much practical experience, and a science worthy of unlimited study and investigation.

We are accustomed to think of the diagnostic advantages of the X-Ray principally in relation to examination of bone injury or lesion and localization of foreign bodies within the tissues, but with improved technique and powerful apparatus there are many other conditions even of the viscera that are coming to be determined more accurately by this than by any other method. I have time merely to enumerate some of the conditions in the diagnosis of which the X-Ray has proven of great value. In connection with the head mention may be made of depression or fracture of the skull, foreign bodies in brain or skull, bone disease as syphilis, rickets, hydrocephalus, changes in the sella turcica as in acromegaly. Unerrupted teeth or malformations of the jaws or alveolar processes, and suppuration of the facial sinuses are some of the conditions in the face demonstrable by radiography. Diagnosis of lesions in the thorax and abdominal cavities should include first as thorough fluoroscopic examination as may be since by this means the organs may be observed in their various movements and their general relations determined during the cycles of functioning activity. The fluoroscope or the radiogram may thus show consolidated areas of the lung cavities, liquid effusions, tumors of the lungs or mediastinum, aneurism of the aorta, size and outline of the heart, and to a certain extent the large blood-vessels. In the abdomen the condition of the stomach may be determined after the ingestion of a bismuth meal or solution as may also the esophagus during the process of deglutition. Size, shape, motility and position may be observed as well as irregularities of the bismuth shadow denoting tumor or ulcer. The progress of the food out of the stomach and along the intestine can be followed to a considerable degree by the fluoroscope or a series of radiograms. The outline of the liver is seen upon the screen and any irregularities of its surface or border indicate some lesion here. Presence of renal or vesical calculi is revealed by the radiogram, and even some radiograms have been obtained of certain forms of gall stones. Tortuous fistulous tracts may be outlined by injecting them with bismuth paste which procedure, as you all know was the occasion of the accidental discovery of the curative value of such paste intubercular sinuses. As an incidental suggestion, is it not possible that this curative effect may be due to the radio-activity of the bismuth itself similar to that exerted by the thorium paste just recently employed as a radioactive agent in the treatment of tuberculosis lesions of the skin, with apparent great success.

These are but some of the conditions in which radiography is

of solid worth as a means of diagnosis, but the technique of obtaining a satisfactory picture and its interpretation, in the various regions and of various lesions cannot of course be touched upon here. Suffice it to say that the technique required is very varied and calls for much practice and some ingenuity. Of the exact localization of foreign bodies within the tissues by the numerous stereoscopic methods I can but say that the principles and details are too complicated to be discussed here. Nor can the methods and details of the development and other photographic processes be considered. The Roentgenologist should perfect himself in some certain routine and better results will be obtained by adhering strictly to that in which he is most expert.

In considering the therapeutic application of the X-Ray it is of foremost importance that the proper dosage be determined and this means practically determining the susceptibility of each case exposed to the rays; and there are such enormous differences in susceptibility that one should always avoid a dangerous exposure by giving only minimal exposures until the resistance of each skin is found out; although some authorities state that the variability is only moderate, about four times as marked in some as in others. But undoubtedly an occasional decided idiosyncrasy is met.

As in any other therapeutic measure the dosage must depend upon the condition present and the effect sought. If, for instance, the case in hand is one of a superficial, benign skin lesion the dose and in a measure the character of the rays must differ materially from those administered in a deep-seated and ulcerating carcinoma; the former requiring rays richly actinic from a soft tube, while the latter could be benefitted only by the more penetrating rays from a hard tube possibly filtered through aluminum or leather shield.

The various methods at some time or at present in vogue for measurement of the strength of current through the primary of the coil, the length of spark a tube will back up, the chromoradiometer and similar physico-chemical methods, by which the amount of rays is measured by color changes produced in certain fluorescent chemicals, and many others. They all lack the elements of practicality and have no reliable or universal unit standard. To my mind the most practical, though somewhat cumbersome measurement of dosage consists of the several factors, namely, the current in milliamperes passing through the tube, the penetration of the tube as determined by one of the convenient forms of penetrometers, the distance of the antikathode from the skin and the time of exposure. Thus we may speak of a dose of so many milliampere-seconds or minutes, as the case may be, with a tube of a certain penetration, so many inches from the surface exposed.

While this system is not so simple as to speak of so many H or N, or whatnot, yet it appeals to me as giving a more practical and

concrete idea of the amount and kind of rays administered.

As a therapeutic measure the greater field of the X-Ray is that of skin diseases although its efficacy in many other conditions is little short of marvelous. Of skin lesions those most favorably influenced and in a very great percentage of cases cured are lupus vulgaris and erythematosus, acne vulgaris and rosaceae in which lesions a favorable result may almost always be assured. Favus, sy-cosis and other parasitic or coccogenous dermatoses usually readily yield to this treatment. Chronic eczema is benefitted in many instances as is also psoriasis, though the latter is especially prone to recurrence. Senile or varicose leg ulcers are often healed by this means with a shrinkage of the enlarged veins and a practical cure of the varicosity. Certain forms of nevus may be greatly improved or made to disappear entirely by reason of an acute irritation from the rays producing scar tissue with consequent atrophy of the angiomata. Hypertrichosis when extensive may be subjected to the rays with the result that the hair will fall but a return must be expected though not of so heavy a growth as the first. In one or two instances in my experience repeated removals have resulted in a satisfactory cure, though I would not recommend this treatment for the light fuzzy growth on womens' faces, but only in those cases of extensive beardlike growths. Some observers have utilized the rays in pruritis ani or vulvae with a marked curative effect. Hyperidrosis, papillomata, clavus and other callosities have yielded to irradiation. Other skin lesions reported cured or greatly improved are lichen planus, prurigo and blastomycetic dermatitis.

In the treatment of malignant growths either alone or as an adjunct to surgical procedure, the X-Ray is the most valuable therapeutic measure that has been developed in the last two decades—not excepting salvarsan with its present great furor (and of which, parenthetically, I may have the audacity to say that it is tremendously overrated and will in the near future be relegated to a position of the occasional remedy in the exceptional case.) The class of tumors which is most successfully treated by radiotherapy is the slow-growing cutaneous epitheliomata but each of these must be individualized as to the degree of vigor of the treatment. Exposures should be given up to limit of tolerance of the surrounding skin without producing a severe dermatitis though it is usually necessary to evoke some reaction in the healthy skin. Epitheliomata of the lip or other mucous membranes are not so susceptible to the influence of the rays and in most cases it is preferable to remove these surgically and ray site afterward. On deeper seated carcinomata the effect of the X-Ray is less certain though it does undoubtedly benefit or even cure some and surely does in many instances cause glands presumably infected with malignant cells to disappear. In the majority of large carcinomata it is the better treatment to have the

growth ablated if there is reasonable assurance that the tumor may be completely extirpated or practically so, and then to subject the site to irradiation after operation. On the other hand many cases are reported which apparently inoperable when first seen have so greatly improved under the rays as to render them operable with reasonable hope of success. Here a word of warning in regard to this preoperative raying may not be amiss. Caution should be exercised that the operation is not undertaken till after the effects of the rays on the adjacent skin have well worn off else there is apt to develop a sloughing of the skin along the edges of the incision and consequent delay in healing which in some instances is most tedious and discouraging.

The trophism of the skin is greatly affected and the traumatism incident to the operation seems to produce a condition analagous to a third degree X-Ray burn with its supremely tedious efforts at repair.

Sarcomata are still less amenable to the action of the rays, but the best treatment is as complete ablation by surgical measures as possible and postoperative raying combined with administration of Coley's mixed toxins of streptococcus erysipielatis and bacillus prodigiosus. This treatment I have resorted to in but two cases. The first, sarcoma of the tonsil, was followed after removal by enlargement of the external cervical glands. These disappeared completely under the influence of the rays, but ultimately there was a recurrence of the growth in the pharynx which determined a fatal issue. The second case was sarcoma of the neck involving the sternocleido-mastoid muscle. This was removed apparently quite completely and the site was subjected to the rays and progressively increasing doses of Coley's toxins administered hypodermically. Improvement was manifest for two or three months when a small nodule appeared in the cicatrix over the clavicle. This was removed and left to heal by granulation. Raying and the toxins were resumed with the result that the site of operation healed entirely and remained so, but a lethal termination ensued after a few months, probably from visceral metastasis, possibly in the mediastinum as the patient suffered greatly at times from pain resembling intercostal neuralgia; however, an autopsy was not permitted. A great field for the X-Ray therapy is that of tubercular disease, more particularly what are commonly referred to as surgical tubercular lesions, including there under tubercular arthritis, osseous tuberculosis, Pott's disease, tuberculosis of tendon sheath, of the peritoneum and of the lymph glands, especially cervical adenitis. From rather extensive analysis of such cases it would seem that surgical treatment of local tubercular lesions is soon to give place to radiotherapy, tuberculin and bismuth paste injections. Pulmonary tuberculosis, while apparently benefitted in some cases does not show the large

percentage of cures and improvements accorded to these measures in localized tubercular lesions.

Of other systemic diseases, leukemia is one most readily influenced by the X-Ray. I wish to cite but one case in my practice; one of the splenomyelogenous type. At the beginning of treatment there were 247,000 leucocytes, 2,400,000 erythrocytes per c. mm and 55 per cent hemoglobin. The spleen extended about one inch to the right of the umbilicus. Injections of sodium cacodylate were employed for about a month with little improvement when the case was referred to me. Irradiation over the chest and spleen was begun and increasing doses of liquor potassi arsenitis administered. Bi-weekly exposures to the rays of 5 milliampere-minutes with a tube of 6 inches penetration at a distance of 4 to 7 inches soon induced a decided tanning of the skin of the chest and abdomen which signalled an interruption of the raying was necessary. Also the medicine was interrupted at intervals when intestinal colic betokened its full physiological effect. After one month of this treatment the blood-count showed 40,000 leucocytes, 4,000,000 erythrocytes and hemoglobin 80 per cent. Another month's treatment, somewhat less vigorous reduced the leucocytes to but 4,400, while there were 4,500,000 erythrocytes and 90 per cent hemoglobin. During this time there was a gradual recession of the spleen till it assumed apparently its normal size. This condition has remained permanent now for six months, though an intervening attack of acute pericarditis occasioned some alarm, but even then the blood showed only a slight leucocytosis of a septic type, no myelocytes being present. This fact, by the way, was of value in establishing the diagnosis as I was fearful of a glandular enlargement in the mediastinum before the cardiac signs developed, there being symptoms of pressure on the trachea or laryngeal nerves.

In the treatment of goitre I will say only that in my experience which is, to be sure, rather limited, the rays have been uniformly successful in relieving the symptoms and decreasing the size of the gland in both the simple and exophthalmic varieties.

Time and perhaps your patience limit me to the mere mention of a few other conditions in which radiotherapy has been of more or less value. Among these are keloid, trachoma, hypertrophied prostate, fibroids of the uterus, dysmenorrhea, certain forms of neuralgia and other nerve lesions and for the production of sterility particularly in the male.

About twenty-five county secretaries have not as yet returned the receipt blank to the Associate Editor. These should be returned at once. The Journal will soon carry advertising and the signed stubs are necessary to show the post office department.

SUBCUTANEOUS TRAUMATIC INJURY OF INTESTINE WITH A CASE OF RECOVERY FOLLOWING OPERATION.*

ALBERT L. YOCOM, Jr., M. D., Chariton, Iowa.

Traumatic lesions, subcutaneous lesions, lesions by blunt force or lesions without penetration of the abdominal wall are the various classes of cases which may come under this subject. These lesions are characterized by a tearing, rupture, laceration or contusion of the intestine. The mesentery may be torn or bruised, the circulation then being destroyed to the gut which this tissue supplied.

Nature of the Injury. Laceration of the mesentery, tearing the intestine from the mesentery, destruction of circulation and rupture of the intestine may result. The extent of the injury may only be a slight bruising of the peritoneum which may later produce a necrosis with a secondary peritonitis.

In rupture from compression the inner coat perforation is small while the outer coat perforation is large and lacerated.

A peritonitis always follows these injuries. It usually becomes general but may only be localized with abscess formation.

The mucous coat may be torn causing profuse hemorrhage into the bowel.

The more fixed parts are more liable to be lacerated, viz: the duodenum, cecum, upper end of the jejunum and lower ileum. The latter two furnish 75 per cent of all intestinal injuries of this nature.

Etiology. Deaver's classification of the forces causing injury of this nature is: 1st concussion, 2nd percussion, 3rd compression.

Concussion happens from indirect violence as by being struck on some other part of the body and the force transmitted to the point of injury. Falling from a height upon the buttocks is an example.

Percussion. This is produced from the impact of a rapidly moving object as from horse kicks, flying objects in an explosion, etc.

Compression. It results from a squeezing of the abdomen between two solid objects as between logs, runover accidents, being caught between car buffers, etc.

Pressure between the abdominal wall and vertebrae is the usual manner in which this is produced.

A kink of gut may occur at the time of pressure and the intestinal contents consisting of air and fluids are not permitted to pass along producing a ballooning of the gut which bursts when this sudden pressure occurs.

A forced excursion may tear the gut from the mesentery.

A loaded stomach and bowel predisposes to injury.

Location of the blow. The lower abdomen predisposes to in-

*Read before South Western Iowa Medical Society, Osceola, Oct. 1911.

jury of the small intestine, sigmoid or cecum.

A hernia with the intestine in the sac or the pinching of a truss may cause intestinal rupture at the time of some accident.

Symptoms. The symptoms of rupture of the intestinal tract vary and are not always constant. The course of this condition is that of peritonitis except when a tearing of the mesentery occurs when hemorrhage will supervene. In injuries to solid viscera the signs are those of internal hemorrhage resulting in profound shock.

Pain. (a) That from lacerated peritoneum and from (b) infection.

The pain in relation to the degree of injury is not constant as some of the worst cases suffer the least. The initial pain is usually localized, sharp and lancinating. It may or may not be at the site of injury but in the case about to be described the pain was very intense and localized over the point of injured intestine. This pain never abated. The suffering from a contusion of the abdominal wall may be very severe after the accident but does not continue.

Shock. The greater the injury the more profound the shock. It may be early and deep. If this is severe early in intestinal lesions the patient usually rallies temporarily as there is not much hemorrhage.

Vomiting is of much importance. It may appear immediately after injury or not until the peritonitis begins and progresses. If blood is vomited it indicates injury to the stomach and duodenum.

Tenderness and muscular rigidity increases spreading over the abdomen as time passes.

Absence of peristalsis. This always happens when intra-abdominal injury occurs and is the most important symptom we have. Always use auscultation in these cases.

Distention usually appears late coming on after the peritonitis is well under way.

In one half of the cases there is a hyperalgesic zone which corresponds to the injured viscus.

Blood passed from the bowels indicates injury to the mucous coat.

The pulse and temperature are usually good, the temperature not being high and the pulse of good volume and tension. Short in the *Lancet* Sept. 16, 1911 says that out of thirty cases on his service every one which had a pulse of over 100 an admission die within 24 hours.

Diagnosis. In penetrating wounds of the abdomen the diagnosis is easy but in those nonpenetrating injuries it is much more difficult. An early diagnosis is absolutely necessary as the prognosis is increasingly worse as each hour passes.

It is not so important to differentiate between trauma to solid or hollow viscera as the treatment is surgical at once in either case.

A progressively increasing shock indicates injury to solid organs due to hemorrhage while early signs of peritonitis follow tears of stomach and intestine.

In women one must differentiate from a ruptured cystic ovary or ectopic pregnancy.

Contusions of the abdomen without internal injury sometimes produce a great amount of pain and shock immediately after the injury. This condition will not last but two or three hours when the alarming symptoms will subside.

When an intestinal injury occurs an important diagnostic sign is absence of peristalsis. This does not happen immediately after the accident but will appear in three hours or longer. Permit me to say that this point is of utmost importance and a practitioner should not allow any case of abdominal injury in which this occurs to be treated expectantly. It is rarely absent. In case the peritonitis is due to necrosis of the intestine or mesentery it will not show for several days.

The history of the accident will usually suffice a correct diagnosis from acute gastro-intestinal disturbances as intestinal obstruction, acute cholecystitis, acute inflammation of the female adnexa, appendicitis, etc.

Prognosis. The quicker surgical treatment is obtained and the closer the lesion is to the pylorus the better the prognosis. Without operation recovery does not occur.

Sherk in the Journal of the American Medical Association of March 11, 1911, gives the following table of the length of time which elapsed between receipt of injury and operation with the resulting mortality.

	died	rec'vd	unk'n	mort.
Within the 1st 6 hours64	15	46	1	20%
Within the 2nd 6 hours36	12	24		35%
Within the 3rd 6 hours29	14	13	2	56%
Over 18 hours78	42	35	1	66%

Take note of the increasing per cent of mortality as the time increases before operative intervention takes place.

Treatment. Quick surgical intervention is the only treatment that favors the welfare of the patient. Do not wait to open the abdomen until there is muscular rigidity, vomiting, distention and the patient is moribund from peritonitis.

Murphy says, "Every severe trauma of the abdominal wall where severe and sudden pressure has been produced should have an exploratory operation."

A median incision should be made with careful exploration of the entire abdomen. All injuries should be repaired according to their nature. Drainage from the site of the trauma and from the pelvis should be made.

The Fowler-Murphy treatment which consists of the upright position and the instillation of normal salt solution per rectum continuously have greatly lessened the mortality in peritoneal cases and should always be used.

All food and water by the mouth is prohibited until the danger period is over.

Case: J. O. S., male, age 54, farmer, patient of Dr. A. L. Yocom, Sr.

On March 28th, 1911 at 4 p. m., four and one-half miles in the country, while on his knees rolling a log another rolled down from behind striking him near his hips. The impluse knocked him forward onto the logs he was moving and the one striking him passed completely over his body. The abdomen received the brunt of the force with the entire weight of the upper log compressing it against the lower.

Very severe abdominal pain immediately began. Patient got up, walking to the house and drank about one quart of water. His physician arrived at 5 p. m., finding him in very severe pain. One quarter grain morphia was given hypodermically and as this did not relieve his intense suffering it was repeated in one half hour. The pain was located to the left and above the umbilicus. He was immediately moved to his home in town.

At 8 p. m., I saw him with my father. The pain had not lessened in the least and remained localized in one spot. The pulse was 90, full and regular and temperature 99. The abdomen was rather hard with tenderness over the injured area. Peristalsis was present but feeble. A diagnosis of intra-abdominal injury was made, but the patient would not consent to immediate operation. Another 1-4 gr. morphia was given hypodermically. It is not best to give as much morphia as this patient has received on account of hiding the symptoms but he suffered very much and it seemed necessary. He was placed in the Fowler position.

March 29th, 7 a. m., Pain continued very severe, the abdomen being more rigid with a very little distention, and tenderness increasing over the entire abdomen. The pulse was 100 and temperature 99. Patient now consented to opening the abdomen. The home and patient was prepared and at 1 p. m. I made an incision to the left of the median line, midpoint being at the umbilicus. A bloody serum, having a fecal odor, escaped on opening the peritoneum. The liver, spleen, large bowel and stomach were negative. large bowel and stomach were negative. Beginning at the ileocecal junction the small bowel was traced upward. As the bowel was examined a plastic peritonitis soon was noticed. The farther up we went this fibrinous exudate increased. In the upper part of the jejunum about seven or eight inches from the duodenum opposite the mesentery a perforation was found. It had ragged edges, the

mucosa was everted and was large enough to admit the little finger. The intestinal contents were entering the peritoneal cavity. A purse string suture reinforced by a Lembert stitch repaired the perforation. The duodenum was negative. Drainage was instituted, one rubber tube being placed to the point of trauma and one leading from the pelvis. He was immediately placed in the Fowler position and the Murphy proctolysis of saline solution started. Instructions were given to allow absolutely no food or water to be given by the mouth. The pulse remained good, even appeared better after the operation than before.

March 30th., 8 a. m., the pulse was 56 and temperature 98'3-5.

4 p. m., pulse was 44 and temperature 100.

He rested very comfortable the pain was easier and his general condition better. A sero-purulent discharge with a fecal odor saturated the dressings.

March 31st., 8 a. m., the pulse was 50 and temperature 98 3-5.

4 p. m., the pulse was 56 and temperature 99.

Water and liquid nourishment was not allowed, the thirst having been quenched by the saline solution per rectum.

On the evening of this day some pain and tympanites were present but were relieved by the use of the colon tube and rectal flushing. The rectum became so irritable that the saline solution was stopped.

April 1st. 8 a. m., the pulse was 56 and temp. 97 3-5.

4 p. m., the pulse was 60 and temp. 100.

One tenth grain mercurous chloride tablet was given every one half hour until one grain was given.

He began to complain of pain in the right side of his neck running up to the angle of the inferior maxilla. Water and liquid nourishment were now allowed by the mouth.

April 2nd., 8 a. m., the pulse was 66 and temperature 98.

4 p. m., the pulse was 66 and temperature 99 2-5.

The left parotid gland began to swell and became very painful. The bowels moved nicely from the calomel previously given.

Each day the dressings and tubes were removed. Before replacing each time a small amount was cut from both tubes.

The abdomen softened nicely, peristalsis was present the following morning after operation, the patient not complaining except of the parotid which was causing much discomfort. This continued worse, the skin finally becoming red and a deep seated fluctuation could be felt. On April 11 I opened the gland and a teaspoonful of pus was evacuated. The tube leading to the pelvis was removed permanently. On the 12th semisolid food was given.

On April 13th the parotid again showed signs of suppuration, this time the lower lobe was involved. This was opened and several

drachms of pus was discharged. Suppurative parotitis frequently happens in infected peritoneal cases.

On April 21st the last drain was removed, the remaining fistula healing up in a few days.

Summary. 1st. The course is that of peritonitis.

2nd. Absence of peristalsis. Always use auscultation in these cases.

3rd. Early operation. Operate during the first twelve hours.

4th. The Fowler-Murphy after treatment must be used.

The Journal.

With this issue we complete the twelfth number of the first volume of the Journal of the Iowa State Medical Society. The page number reaches 716. In the back of this number you will find a comprehensive index. A wide variety of topics have been discussed by able men. The profession of Iowa has no need to be ashamed of its membership. We feel sure that a careful reading and study of the papers here presented will materially improve the practice of medicine.

The department devoted to county societies is, we trust, to improve from time to time and we invite pertinent suggestions concerning programs and arrangements in meetings. We shall discuss the duties of councilors and county officers when opportunity presents itself.

For the July issue, we expect to revise the mailing list and no names will be found there excepting those for whom dues have been paid for 1912. If you have not yet paid your dues, attend to it at once, send the check to your county secretary, so that everyone entitled to receive the Journal will get it.

At the recent state meeting, a resolution was adopted which, for the purposes of Medical Defense, dates your membership in the State Society from the time the State Society secretary receives your dues from the county secretary. Numerous occasions have shown that a man sometimes pays his dues after he has been notified of intended suit. This is not fair to the man who pays his dues early and to avoid misunderstanding and much unnecessary expense, the above rule was adopted.

The Washington County Hospital is rapidly nearing completion and arrangements are being made for opening and dedication about July 1st. The building is three stories, and high basement, absolutely fireproof and is located in the middle of an eleven acre park.

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 EDITOR
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 ASSOCIATE EDITOR

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Address of President Littig.

In this number of the Journal we publish President Littig's address, which is perhaps the strongest official paper ever read before this society. It was a courageous expression of firmly established principles based on long and wide individual experience. Dr. Littig did not waste much time in saying how big we are, but did give a good deal of attention to what we could do to make us bigger. Reading this paper carefully we find many arguments for higher educational, moral, ethical, and professional standards. One of the most important subjects considered that has a definite bearing upon professional educational processes, was the hospital. Conscientious surgeons practicing in our smaller cities, have been confronted with a very serious problem in putting themselves on a level of equality with the surgeons practicing outside in large cities or in better organized communities than we have. The medical college problem and the social and moral problems that confront the profession can be controlled to a greater or lesser degree by the profession itself, but unfortunately the hospital is under the control of lay people that have but small conception of the professional requirements of a hospital. In some communities the hospital people listen attentively to the advice of the better class of the medical profession, and in other communities entirely ignore the profession or so completely that almost nothing is accomplished.

In Iowa the only two hospitals that appear to have any adequate facilities for doing modern scientific work are the State University Hospital and the Methodist Hospital in Des Moines. These

two institutions have been influenced greatly by the medical schools directly or indirectly connected with them.

Admirable as is the present equipment of Methodist Hospital in Des Moines, there are certain signs that seem to show that there are underlying elements of weakness which are held in check now by the strong medical men connected with it. Only a few weeks ago we received a little pamphlet containing a prospectus of a proposed dedication of a new building. It read very much like the Lydia Pinkham literature. We could not help feeling that the next chapter would be the advising of some quack method of treatment. It was painful to think it was necessary for this large charity to resort to such mean and contemptible methods of bringing itself to the attention of the public. This little pamphlet was sent to me by one of the most prominent surgeons in Iowa who lives a long distance from Des Moines, and he assured me that the hospital people had offered to take a number of his patients to Des Moines and operate on them and treat them for a very nominal fee. I do not feel that this represents the hospital itself but some of the enthusiastic workers who believe in Lydia Pinkham methods.

There are a large number of other hospitals in the state, some in towns large enough to warrant good scientific equipment, but so far as we can learn, none of them have such equipment. We mean suitable laboratory and X-Ray apparatus, means of measuring blood pressure, etc.

Agatha Hospital in Clinton has a good laboratory equipment, but unfortunately this is a matter of private enterprise and does not belong to the hospital itself. We noticed a few days ago a beautiful desk and railing which had been added to the hospital for the convenience of the book-keeper and cashier. I suppose this will be pointed out by members of the Hospital Board as a most desirable and necessary hospital equipment.

The lay people generally suppose that a hospital consists in a beautiful building, beautifully located, and a good kitchen and dining room outfit. Now this is all necessary for a boarding house, but not for a hospital. The better informed people know that scientific equipment is necessary to work out scientific problems, and there are no more difficult problems than the ones connected with disease. The hospital people are not altogether responsible for this. They do not understand the real requirements, and the profession as a body has not made sufficient effort to instruct hospital managers, and therefore they are entirely at sea as to what a real hospital is. I have in mind some most excellent and desirable boarding houses for sick people in Iowa, but I know of a very small number of institutions entitled to the name "hospital".

The Iowa and Illinois District Society has arranged a sympos-

ium on hospitals for their July meeting, and it is hoped that by continuous and urgent effort the conditions of hospitals may be improved, so that the surgeons in Iowa will not suffer the humiliation of seeing the most intelligent patients seeking hospital service outside.

In the most gracious reference to the Burlington session, in the last issue of the Journal, no reference was made to two most important factors that contributed to the success of that meeting. First, the committee of arrangements provided the best auditorium we have ever had. Second, the church people insisted on "no smoking." The members could hear and they could breathe; there was no moving in and out during the reading of papers. A good church auditorium, and "no smoking" may be put down as "sine qua nons" of a meeting, and we are grateful to the church people and to the committee of arrangements for a most valuable demonstration.—L. W. L.

The American Hospital Association has issued a leaflet announcing the objects and purposes of the organization and detailing some improvements in the hospital construction, maintenance, and administration that have been established through the influence of the association.

The Association will hold its next annual session in Detroit Sept. 24th to 27th. Any one desiring further information concerning the Association should address Dr. J. E. Brown, Sec., Toronto, Canada.

The Council.

Dr. Ira K. Gardner, of New Hampton, was elected chairman for the year, and Dr. C. A. Boice, of Washington, was re-elected secretary. The Council has before it the problem of building up the organization of county societies, arousing interest, and increasing the membership. The membership in the State Society has not materially increased during the past six or seven years. Only one county—Chickasaw, Dr. Paul Gardner, secretary—has so far reported every physician in the county in active membership. There are about one thousand physicians in Iowa who should be in the organization. The members of the Council are ever ready to assist the county secretaries in their efforts to make a better society.

Fee Division.

Dr. Fred W. Taylor of Provo, Utah, in his Annual Presidential Address read before the 17th Annual Meeting of the Utah State Medical Association, in part said "the question of the division

of fees is a simple one if all the parties to the transaction desire to do right. The real problem is to eliminate the parasite, the fellow who wants something for nothing, fees without real helpful service.

"There is no question of the fact that every skilled physician, surgeon, or other specialist, who has to do with a case should be paid for the work performed. The evil of the division of fees lies in the secrecy that has in the past been the rule among those who have been in the habit of dividing fees "also." "In a few words the whole question of the division of fees can be stated as follows: No division between physician, surgeon, or other specialist, except for actual professional service to patient, by and with the consent of the patient and the presentation of a joint bill."—Northwest Medicine.

Things Change.

Says Dr. Stuart McGuire of Richmond, Va., son of the famous Hunter McGuire:

"Nineteen years ago, when the University College of Medicine was established, I was appointed assistant to my father's surgical clinic and my principal duty was to provide for his weekly lecture. He rarely knew what cases I had for him, and he rather prided himself on his ability to successfully deal with any patient assigned to him. It so happened that on two occasions I had a case of goiter. He discussed the etiology, pathology and symptomology of the disease, but always found some excuse for not operating. Finally one night he called me into his office and said, "Stuart don't give me any more cases of goiter in my clinic. I once operated on a case and it was the most bloody, barbarous and unsurgical procedure I ever attempted. Every man must be taught by his own experience, but there is one thing you can learn from me, it is to let goiter alone."

"La Reanimation Du Coeur".

It will be remembered that some years ago Dr. W. S. Conkling of Des Moines published a paper in the New York Medical Journal on "Massage of the Heart in a case of apparent death from Anesthesia". Very little has been said on the subject in this country but abroad, particularly in France, considerable has been written on it. This is probably due to the more frequent use of chloroform in Europe and the more frequent anesthesia fatalities.

About the time Dr. Conkling reported his case Ch. Leudrumont collected and published 24 cases from all sources, 14 from French, 5 from German, 4 from American, and one from English Journals. More recently P. Mocquoit of Paris in the *Revue de Chirurgie* has collected 53 cases with 11 complete success and 11 with partial

success (life preserved several hours). The method of access; thoracic 21 cases with two complete success (Conklings Igelrud) and 5 partial successes (Maag Sick, Lenarmont, Jeanbran Alves), 10 cases trans-diaphragmatic route all failures, 22 cases abdomino--sub-diaphragmatic, 9 complete successes and 6 partial successes.

The manner of reaching the heart would of course depend on the nature of the operation. If the chest was open as in Conkling's case, the heart could be grasped by the hand and stimulated by compression repeatedly performed. If the abdomen was open the heart could be easily grasped by introducing the hand and compressing the organ through the diaphragm—without opening the diaphragm. If the operation was remote from the heart or the anesthetic was for the other purposes a rapid abdominal section could be made and the heart reached by the sub-diaphragmatic route.

The large percentage of failures from massage of the heart in apparent death from anesthesia has been in considerable measure due to the delay in resorting to this method of stimulating the heart, the resort to artificial breathing, electricity, etc. The important lesson to be derived from a consideration of this method of stimulating the heart is that when the chest or abdomen is open and the heart stops, not to waste time in resorting to more uncertain measures but to at once practice massage of the organ. This should be the first consideration. The massage should be continued 5 to 10 minutes or longer, even 20 minutes or more if the heart should not resume its work in a satisfactory manner. It may be said that after the heart has ceased to beat for more than 10 minutes very little may be expected by this method of treatment, although in Sick's case three fourths of an hour had elapsed before massage was attempted. After fifteen minutes rhythmic, energetic compression at the same time continuing artificial respiration, or one and one-half hours after the heart had ceased to contract, the movements of the heart became regular. Two hours after the completion of the operation, consciousness returned. After twenty-four hours the patient fell into a collapse and died.—D. S. F.

Colitis and Pericolitis.

Dr. Arpad G. Gerster of New York in a paper read before the American Surgical Association June, 1911, and published in the *Annals of Surgery* Sept., 1911, offers very valuable suggestions which serve to elucidate some of the unexpected findings on opening the abdomen and which emphasizes the importance of most painstaking histories before undertaking abdominal operation. He shows that bacterial infection may escape from the visceral lumen by exosmosis and lead "to denudation of its (endothelial) covering which may result in adhesions of adjacent surfaces". It is inter-

esting to note the character of the adhesions. If the inflammation has been localized and due to active infection the adhesions will be dense and firm. If the inflammation has been more general, as in a colitis and excited by a less active infection the adhesions will be thin and veil like. It appears that the density and permanency of the adhesions depend in considerable degree on how long the irritation or inflammatory process continues. A chronic persistent infection in the appendix will cause dense and troublesome adhesions about the organ. An active infection of the appendix attended with severe symptoms will subside and after a few weeks abdominal section will show very few adhesions and very little evidence of the previous storm, so rapidly are the adhesions absorbed when the inflammation ceases.

A colitis Dr. Gerster thinks, may be attended with an exosmosis of infective germs sufficient to explain the veil like adhesions which have been known as Jackson's Veil or Lane's Kink. Dr. Gerster points out that these adhesions are more massive at the points of physiological narrowing of the gut—as the cecum, the hepatic sigmoid and splenic flexures; that constipation is a most important causative factor in that it favors ulcerative processes a limited colitis and pericolitis. Dr. Gerster is of the opinion that the wiping off of the veil or the dividing of the bands and straightening of the kinks are of little use—as the adhesions will reform—if the colitis persists and the constipation is not overcome by a regulation of the intestinal function by diet, enemas and laxatives.

If Dr. Gerster is correct in his observations and conclusions many an appendix has been operated on for a colonic stasis and the symptoms persisted because the appendix received the entire attention of the surgeon and the constipation ignored. Whatever view we may take of this matter one thing is certain that is, we should ascertain by the most painstaking care if there is any local ulcerative process; if there is a pericolitis, and if it is an apparent necessity for an operation on the appendix or for the adhesions to feel that our work is only partly done until the constipation or the intestinal stasis is overcome. The physiological movements of the colon are the most certain means of preventing and absorbing the adhesions.—D. S. F.

The Status of the General Practitioner.

By W. G. Watson, Baltimore.

“That the family doctor is at present a necessity is self-evident. That he is here to stay is my firm conviction. His position is not entirely satisfactory. With the rise of specialism he has lost prestige. By the public at large he is often regarded as one who has not the mental capacity to take up a specialty. There are some, how-

ever, who have seen the light. One of my most intelligent and prosperous patients tells me that if I specialize she will cut my acquaintance."

"Some time ago my wife, upon being introduced to a woman in Washington, was immediately asked what was her husband's specialty. Upon being told that I was a family physician, she exclaimed, 'How glorious', and then told this experience: Their family doctor died; then as various members of the family became ill they sent for an appropriate specialist, sometimes getting the wrong one. At the end of the year they had paid bills to ten specialists, totaling a large amount, and felt no better served than by the family physician, and furthermore, were in the unsatisfactory position of having to guess whom to send for when the next illness should occur. She was searching for a good general practitioner."

"The compensation of the good general practitioner is entirely inadequate for the services rendered, and the disparity between his fees and those of the surgeon and specialist is absurd and not based upon differences in ability."

"I do practically nothing that I can hire others to do for me. In my office work I have a very efficient helper, a secretary-nurse or nurse-secretary, who saves my time in a hundred ways; at the telephone, with patients, examination of urine, blood, stomach contents, etc. I have two consultation rooms while attending to a patient in one, another is dressing or undressing in the other. I rarely lose a minute between cases."

"I do not allow my professional visits to be prolonged into social calls. I work in a hurry, endeavoring not to let the hurry get into my speech or manner, or interfere with proper care of my patients."

"I cannot go to church, seldom get to places of amusement, have almost no social life; can squeeze in medical meetings occasionally. My reading is done in snatches, usually before breakfast."

"If this state of affairs is to be remedied, we must secure better compensation for our services, thus allowing more time for equipping ourselves for good work, and more leisure to be spent as do other members of society. To secure better compensation we must better our standing in the community. The only way this can be accomplished, it seems to me is for the general practitioners to make themselves a body worthy of the respect of the specialist and the general public and then start a propaganda of education, letting the public know that we are not on the verge of becoming an extinct species, but are here to stay, that they are much in need of us, and that we are worthy of better compensation."—Bulletin of the Medical and Chirurgical Faculty of Maryland.

Announcement.

Dr. Bogart, Excelsior Springs, Mo., wishes to announce to his many friends and patrons that he sailed for Europe from New York City, on the Baltic of the White Star Line, June 6th, to take some special work on kidney disease and rheumatism.

During his absence his office and business will be left in the hands of a thoroughly competent physician. He will return between August 15th and September 1st.

Book Reviews.

Notice of Judgment No. 1350, of the Department of Agriculture concerns a German Headache Powder. This was recommended as a "safe, sure and prompt relief for sick and nervous headache, neuralgia, etc." Analysis proved it contained 21.66 per cent of acetanilid, misleading and false claims were proven and the defendant pleaded guilty and was fined \$25.00 The Department has rendered many judgments against the adulteration and misbranding of candy, vinegars, ketchups, oysters, fruits, etc.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert H. Green, M. D., Prof. of Genito-Urinary Surgery at the Fordham University, New York, and Harlow Brooks, M. D., Assistant Professor of Clinical Medicine, University and Bellevue Medical College.

Third Revised Edition. Octavo of 639 pages, 339 illustrations. Philadelphia and London. W. B. Saunders Company. 1912 Cloth \$5.00 net. Half Morocco \$6.50 net.

One of the first things to impress the reader is the space devoted to examinations of the genito-urinary apparatus and the urine. The extreme importance of the kidneys and the variety of diseases to which they are subject has led to a distinct surgery of these organs. The opportunities for exact diagnosis when scientific methods are patiently employed, must appeal to every physician and surgeon. Dangerous diseases so frequently develop insidiously that an early and thorough investigation is of the highest importance in order that adequate means of relief may be employed at the most opportune moment, warrants a full and specific description of methods to be employed, all of which will be found in this book. When the diagnosis is made, the employment of established surgical procedures is clear. An important section is a consideration of the kidneys in diseases not primarily involving these organs, as the kidneys in acute infectious diseases, in syphilis, etc. A chapter is given to Bright's disease. This is recognized as a medical disease, but there are some very difficult problems connected with it that lead surgeons to be watchful lest some acute exacerbations in a case of Bright's disease be taken for some inflammatory condition of the kidney. One of the merits of the book is the careful preparation of the mind of the reader for the surgical and operative problems relating to diseases of the kidneys. After devoting 318 pages to the kidneys, the remaining 300 pages are given to the bladder, urethra, etc., making a very complete work. The fact that the book has passed through three editions plainly shows that the profession appreciates the merits of the work.—D. S. F.

Surgical Clinics of John B. Murphy, M. D., Vol. 1. Number 2. W. B. Saunders Company. \$8.00 paper. \$12.00 cloth.

The second number of Vol. 1, Surgical Clinics of Dr. John B. Murphy, Mercy Hospital, Chicago, has been issued by the W. B. Saunders Com-

pany. The first number appeared in January and the second in April, and will appear regularly every two months. This number contains 158 pages and treats of 19 subjects, seven of which relate to fractures and to joints, subjects always interesting when treated by Dr. Murphy's illuminating methods. The matter is particularly interesting when it relates to plastic operations on bone, as for instance non-union. This number like the first is well illustrated, especially the bone and joint cases. The discussions are very concise and the essential points made very clear.

In addition to the bone and joint cases, twelve other patients are represented suffering various types of diseases for which operations were performed for their relief. This like the preceding number no doubt will be well received by the profession. —D. S. F.

Differential Diagnosis. 2nd Edition Revised. Presented through an analysis of 385 cases. By Richard C. Cabot, M. D., Assistant Professor of Clinical Medicine, Harvard Medical School. Octavo of 764 pages, illustrated. Philadelphia and London; W. B. Saunders Company, 1912—Cloth \$5.50 net.

This book requires some special consideration in that it presents the subject in a somewhat unusual way. No attempt is made to present classified symptoms which may differentiate one form of disease from another. In fact no classification of diseases is made. The plan is to present well established symptoms which must be recognized in all patients which come under our care and then establish the meaning and significance of these symptoms by the analysis of illustrative cases. For instance under the head of Pain are presented general considerations; types of pain; relation of pain to other facts; theories regarding the production of pain, etc. Then comes a chapter on Headache; the conditions under which it may occur; then the analysis of 22 cases in which headache is the most prominent factor. These cases are studied by laboratory and clinical methods and the conclusion is finally reached as to the nature of the disease which produces the headache. This method of analytic study covers the entire range of pain, as, lumbar pain, abdominal pain, epigastric pain, right and left hypochondriac pain, right and left iliac pain, etc. This rigid analysis of pain as it occurs in all part of the body is discussed by the recital of 212 cases in which all its relations are brought out, its association with other symptoms examined, etc. Fever, chills, convulsions, weakness, are considered in the same way. Then comes cough, vomiting, hematuria, dyspnea and jaundice.

A thoughtful consideration of this method of teaching with its close relation to hospital clinical methods which are coming more and more to be regarded as the natural and logical methods and in the hands of so profound and accomplished a clinician as Dr. Richard Cabot possesses a value difficult to estimate. This is a book not only for the internist, but for the surgeon as well.—D. S. F.

DEATHS.

F. L. Woodburn, M. D., a popular young physician of Washington county, whose home until recently was at Ainsworth, died June 4, 1912 at his home 631 West Monroe street in Washington. He secured his medical education in the medical college at Keokuk, Iowa, and was graduated in the class of 1906. After his graduation he located at Rubio, this county, where he practiced medicine for a year and a half. He went later

to Castana, Iowa, near Sioux City, and removed to Ainsworth in March, 1910. The doctor was married to Miss Anna Brown, daughter of Mr. and Mrs. M. E. Brown, of this city, on August 31, 1904. Two children were born to them, Marion, aged 6 years, and Ila, aged 4 years. Dr. Woodburn was a member of the Washington County Society, and was popular with his fellow practitioners. He was well known and well liked in the Rubio and Ainsworth vicinities, and a large circle of friends and acquaintances will extend their sympathy to the wife and children and other near relatives.

Daniel Jackson, M. D., Kentucky School of Medicine, Louisville, 1865; a Confederate veteran and medical cadet during the Civil war; a member of the Pottawattamie County and Iowa State Medical Societies and a member of the council; for many years a practitioner at Audubon; consulting physician to the Council Bluffs General Hospital, died at his home in Council Bluffs, May 13, 1912, of asthma, aged 65.

Joshua Worley, M. D., Starling Medical College, Columbus, 1861; assistant surgeon of the 126th Ohio Volunteer Infantry, throughout the Civil war; for many years a member and president of the board of education of Belle Plaine, Ia., died at his home at that place, May, 14, age 78.

Daniel O'Doherty, M. D., Rush Medical College, 1880. A member of the American Medical Association and Iowa State Medical Society, for many years a practitioner of Charlotte, Iowa, died at the home of his brother in Danville, Iowa, May 2, from cerebral hemorrhage, age 71.

Humphrey E. Bowman, M. D., University of Maryland, Baltimore, 1839, formerly a practitioner of Shelbyville and Newark, Mo., and for over fifty years a resident of Farmington, Iowa, died at the home of his daughter in that place, April 29, from senility, age 93.

SOCIETY NEWS.

We are in receipt of a copy of The Conservative, Independence, Ia., of May 22, giving in full an address of Dr. Wm. J. Robinson of New York City before the Sunset Club of New York. The title of this able address is, The National Department of Health. Dr. Robinson gives one of the most able discourses on this subject that we have seen. He fully and freely gives the reasons for a department of Health and the reasons The League of Medical Freedom does not wish such a Department. If the physicians were one half as active in support of the Owen Bill as is the League against it, it would soon be a law. The publication of such addresses as this of Dr. Robinson in the public press is to be commended. By the way, have your written that letter to Senators Cummins and Kenyon, and your Congressman?

21st meeting of the Lee County Society was held, Friday, June 14, 1912 at Keokuk. The meeting was called to order in parlors of Keokuk Hotel at 9 o'clock a. m. The morning was given over to a sight-seeing trip in automobiles to the scenes of activity on the Big Dam. After luncheon at the Keokuk Hotel, the scientific program was taken up. The ladies were invited to attend and were entertained during the afternoon with a special program.

Program: "Operative Procedures in Advanced Malignancy"—C. E.

Ruth, Des Moines; "The Need of More Exact Diagnosis in Diseases of the Right Lower Quadrant"—C. A. Boice, Washington; "Pain in Gastric Ulcer"—J. R. Walker, Fort Madison; "Indications for Tonsillectomy"—R. M. Lapsley, Keokuk; "Tonsillectomy Versus Tonsillotomy"—R. S. Reimers, Fort Madison; "The Prevention of Typhoid Fever by Vaccination"—O. T. Clark, Keokuk; "Double Uterus; Pregnancy; Specimens"—F. B. Dorsey, Keokuk.

Officers: W. C. Kasten, President, Fort Madison; E. G. Wollenweber, Sec'y and Treas., Keokuk.

Entertainment Committee: F. B. Dorsey, C. R. Armentrout, O. T. Clark, all of Keokuk.

The Davis County Society met at the Commercial Club Rooms, Wednesday, May 29, at 11 a. m. Dinner was served at the Commercial Hotel at 12 m. The afternoon was devoted to "A Symposium on Kidney Disease"—Dr. C. C. Hedy, Bloomfield, Dr. J. G. Stone, West Grove; Dr. H. V. Baker, Floris; Dr. Geo. A. Lynch, Moravia; Dr. E. R. Newland, Drakesville; Dr. W. L. Downing, Moulton. Discussions—by Drs. Chase and Swinney.

The Polk County Society met Friday, May 24, 1912 at 8:30 p. m. at the Savery Hotel. The Treatment of Normal Puerperium by Dr. M. L. Turner. The Treatment of Chronic Arthritis (with lantern slides) by Dr. Arthur Steindler. Reports of Delegates to the Meeting of the State Medical Society.

The Appanoose County Society met in the Drake Library, Centerville, the evening of May 30th. A symposium on the liver and its diseases was the theme for discussion.

Surgical anatomy, histology, physiology, and embryology of the liver was discussed by Dr. B. F. Sturdivant.

Cholangitis, etiology, pathology, symptomatology and differential diagnosis was assigned to Dr. E. T. Printz.

Cholangitis, the complications was taken up by Dr. J. W. Shuman.

Cholangitis, the treatment—Dr. E. E. Heaton.

Reporter for the meeting—Dr. C. S. James.

Demonstration of liver topography, varieties of gall stones, blood and urine tests—Dr. C. P. Bowen.

The society bulletin is interesting as usual. Very pointed and practical editorials on adenoids and tonsils are given. Again, we think the larger counties in the state would do well to establish a bulletin.

Poweshiek County Society: Through the hospitality of Dr. and Mrs. Chas. Busby, the Society was entertained and the meeting held at their home at Brooklyn, Iowa, Tuesday, June Fourth, at 7:30 p. m.

1. "The Medical Department of the State University" by Dr. Henry J. Prentiss, Professor of Anatomy and Director of the Histological Laboratory.

2. "Serum Therapy and Vaccines" by Dr. E. S. Evans.

3. "An Interesting Case" by Dr. C. E. Harris.

4. Routine Business.

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Dr. E. E. Munger of Spencer failed to attend the state meeting in Burlington last month, but he was engaged in a good cause as the following clipping from the Spencer Reporter of May 8 shows:

E. W. Hackett of Sioux City, who was arrested last week charged with practicing without a license in Clay county waived his preliminary hearing before Justice Steele. W. M. Derry, Jacob Anderson, George Newkirk and four other victims in Lake township have been found who have been bled by the celebrated medical association at Sioux City. The methods used on these men were of the typical gold brick and graft variety. Hackett diagnosed Derry's case and told him that he would require the services of at least four of the firms famous physicians and that the regular charge would be \$120 but as they were from the same town back in Ohio he would make a special price of \$60. On Anderson the same plan was worked and he was promised a great reduction because his case would be a good advertisement for the "doctors" in that part of the country.

Hackett's case is a rather pathetic one in a good many ways and as is generally the case the burden falls on the family rather than on the guilty one himself. Hackett's wife is about to be confined and has been compelled to go to a charitable institution and their child has been sent to a children's home, and all their furniture has been seized for back rent. O. K. Kilbourne, the head of the association of quacks has been arrested but was given his liberty upon putting up \$600 bonds. Kilbourne had a regular doctor's license but was arrested because he was not in possession of an itinerant license.

The Spencer papers were quite emphatic in their denunciation of this firm of quacks. Still they carry advertising of the same character. If you absent yourself from the meetings of the state society, be sure that you have as good an excuse as Dr. Munger had. Iowa has entirely too many quacks. Intelligent cooperation with the State Board of Medical Examiners will lessen their numbers and activity.

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